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MONTANA DEPARTMENT OF STATE LANDS
ABANDONED MINE RECLAMATION BUREAU

WHITEFISH SAND AND GRAVEL PITS
PROJECT NO: DSL 94-004

FINAL PROJECT REPORT

MONTANA
ABANDONED MINE
RECLAMATION BUREAU

Prepared By:

ESA CONSULTANTS INC.
215 West Mendenhall, Suite C-1
Bozeman, MT 59715

November 6, 1995

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FINAL PROJECT REPORT

Whitefish Sand and Gravel Pits #1 through #4 Reclamation Project
Montana Department of Environmental Quality,
Abandoned Mine Reclamation Bureau

1.0 INTRODUCTION

1.1 Project Description

The Montana Department of Environmental Quality, Abandoned Mine Reclamation Bureau (ARMB) identified four gravel pits in the Whitefish area that required varying degrees of site reclamation. Several of the pits contained severely over-steepened headwalls which presented a danger to public health and safety. The reclamation work completed as part of this project generally consisted of grading and flattening pit sidewalls, filling in water-collecting low spots, and revegetation of all disturbed areas.

Approximate locations of the four pits are identified in Figure 1. Landownership, approximate legal descriptions, and approximate pit sizes are provided in Table 1.

At the onset of this project, the ARMB was part of the Montana Department of State Lands. Since then, reorganization has taken place and the AMRB is now part of the Montana Department of Environmental Quality.

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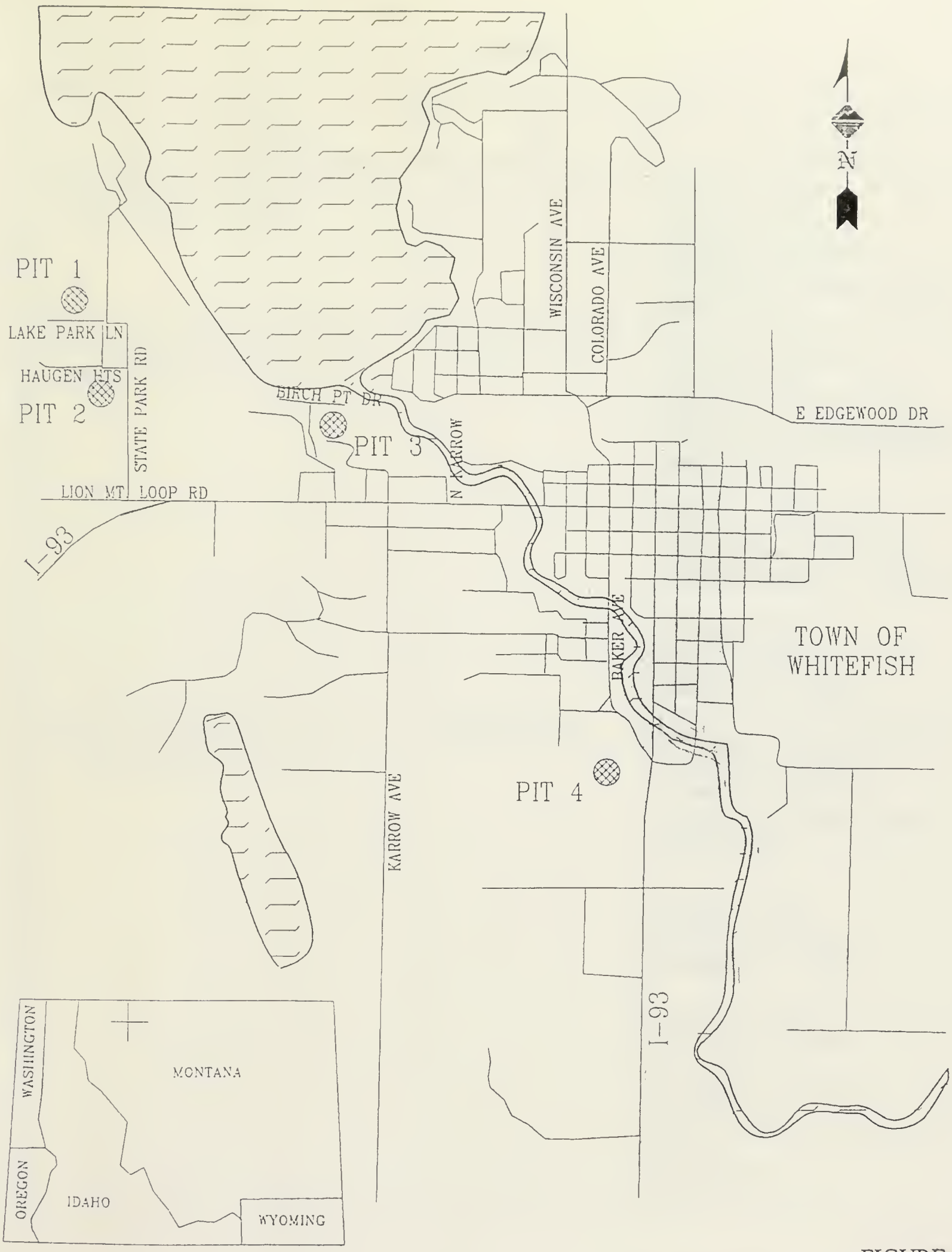

FIGURE 1

Prepared By:

ESA CONSULTANTS INC.

215 West Mendenhall, Suite C-1, Bozeman, MT 59715

TABLE 1

Location (Sec., Twp., Rge.)	Site Name	Owner/Address
T31N R22W NW¼ DE¼ SEC. 26 approximately 4.1 acres	Whitefish Pit #1	Flathead County 800 South Main Kalispell, MT 59901 CONTACT: Bernie Windauer 406-758-5790
T31N R22W SW¼ SW¼ SEC. 26 approximately 1.1 acres	Whitefish Pit #2	Howard D. Hamilton P.O. Box 961 Whitefish, MT 59937-0961 CONTACT: Howard Hamilton 406-862-6162 Roderick A. Rodewald 621 Los Osos Valley Road San Luis Obispo, CA 93402-2602 Flathead County 800 South Main Kalispell, MT 59901
T31N R22W NE¼ NE¼ SEC. 35 approximately 6.6 acres	Whitefish Pit #3	Burlington Northern Railroad North Central Avenue Whitefish, MT 59937 CONTACT: Randy Wolff 406-862-0255 Flathead County 800 South Main Kalispell, MT 59901 City of Whitefish 2nd and Baker Street P. O. Box 158 Whitefish, MT 59937 CONTACT: Dale Ennor, City Manager 406-862-2640

T31N R22W SW¼ SE¼ SEC. 36 approximately 4.9 acres	Whitefish Pit #4	Howard D. Hamilton P.O. Box 961 Whitefish, MT 59937-0961 CONTACT: Howard Hamilton 406-862-6162 Flathead County 800 South Main Kalispell, MT 59901 Montana Department of Transportation P.O. Box 7308 Kalispell, MT 59904-0308 CONTACT: Ross Gammon 406-755-5717

1.2 Project Objectives and Design Issues

Project objectives for reclaiming the four gravel pits were developed to improve the safety of the pits, control erosion, and revegetate the disturbed areas. Major objectives of this project are summarized as follows:

- Complete the reclamation work by utilizing on-site soil materials to achieve the required cut/fill balance.
- Minimize the potential for stormwater runoff from the sites and onto adjacent lands. This has been achieved by grading the pit floors to contain stormwater within the pit, or when this was not possible, grade the entire floor flat to reduce the potential for runoff onto adjacent properties.
- Remove existing debris, trash, and other hazardous or detrimental materials.
- Construct erosion control measures to minimize the potential for future erosion and surface degradation of the sites, including construction of stormwater interception ditches, 3(H):1(V) pit side slopes, and revegetation of the disturbed areas.
- Improve the stability of pit side slopes by controlling groundwater seepage through the newly constructed fill areas and flattening the side slopes.

Numerous issues were addressed during the design phase of this project, which included both general and site specific considerations. General issues that were addressed consisted of minimizing the impacts of construction on adjacent landowners, blending the earthwork

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https://archive.org/details/whitefishsandgra1995esac

grading into adjacent properties, minimizing tree removal along the perimeter of the pits, saving trees within the pits that were of aesthetic quality and value, improving quality of available topsoil by amending the material with suitable mulch and chipped vegetation, and minimizing the cost of construction.

Issues specific to each of the pits were also addressed during the design phase of this project. This included assessment and removal of a 10,000 gallon above ground fuel storage tank in Pit #4, and designing earthwork grading for Pit #4 to accommodate and blend into the new Baker Avenue road extension (which runs adjacent to the east side of Pit #4). In addition, fill areas in the bottom of Pits #3 and #4 were heavily compacted in anticipation of future development and building at these sites.

Based on the project objectives and design issues, construction specifications and drawings were developed to reclaim each of the pits. Listed below is a summary of the work to be completed for each of the sites:

The work under this contract for Sand and Gravel Pit No. 1 will generally consist of:

- Clearing and grubbing of approximately 4.4 acres;
- Chipping on-site tree branches and shrubs;
- Cover soil removal, stockpiling and placement of approximately 400 C.Y.;
- Surface and subsurface drainage and erosion control features including approximately 240 lineal feet of riprap and grass lined perimeter ditches;
- Approximately 13500 C.Y. of excavation and embankment utilizing on-site materials;
- Seeding, fertilizing and mulching of approximately 4.2 acres; and
- Construction of approximately 1825 linear feet of new fence.

The work under this contract for Sand and Gravel Pit No. 2 will generally consist of:

- Clearing and grubbing of approximately 2 acres;
- Chipping on-site tree branches and shrubs;
- Cover soil removal, stockpiling and placement of approximately 300 C.Y.;
- Seeding, fertilizing and mulching of approximately 2 acres; and
- Construction of approximately 1135 linear feet of new fence.

The work under this contract for Sand and Gravel Pit No. 3 will generally consist of:

- Clearing and grubbing of approximately 11.3 acres;
- Chipping on-site tree branches and shrubs;
- Cover soil removal, stockpiling and placement approximately 800 C.Y.;
- Surface and subsurface drainage and erosion control features including approximately 412 lineal feet of riprap and grass lined perimeter ditches;
- Approximately 29500 C.Y. of excavation and embankment utilizing on-site materials;

- Seeding, fertilizing and mulching of approximately 7.0 acres;
- Construction of approximately 2420 linear feet of new fence; and
- Placement of approximately 530 cubic yards of gravel blanket drain.

The work under this contract for Sand and Gravel Pit No. 4 will generally consist of:

- Clearing and grubbing of approximately 17.6 acres;
- Chipping on-site tree branches and shrubs;
- Cover soil removal, stockpiling and placement approximately 500 C.Y.;
- Approximately 35500 C.Y. of excavation and embankment utilizing on-site materials;
- Seeding, fertilizing and mulching of approximately 5.5 acres; and
- Construction of approximately 3200 linear feet of new fence.

2.0 RESPONSIBLE PARTIES

2.1 Contractor

The General Contractor for the Whitefish Sand and Gravel Pits #1 through #4 Reclamation Project was Shumaker Trucking and Excavating Contractors, Inc. The project manager for Shumaker was Joe Aline. Their address is shown below:

Shumaker Trucking and Excavating Contractors, Inc.
P.O. Box 1442
Great Falls, MT 59403
Phone: (406) 727-3537

Several subcontractors were used during this project, as listed below:

Logging:	Eldon and Carlin Rammell, Seeley Lake, Montana
Chipping:	Johnson Brothers Contracting, Missoula, Montana
Fencing:	Buck and Scott Deer, Vaughn, Montana
Seeding & Mulching:	Prairie Hydroseeding, Havre, Montana

2.2 Engineering Design, Plans and Specifications

ESA Consultants Inc. was responsible for reclamation design, and preparation of construction documents including technical specifications and drawings. Steven J. Pierce, P.E., was Project Manager. ESA's address is as follows:

ESA Consultants Inc.
215 W. Mendenhall, Suite C-1
Bozeman, MT 59715
Phone: (406) 587-4554

2.3 Construction Management and Oversight

ESA Consultants Inc. performed all construction management and oversight for this project. The Project Engineer was Steven J. Pierce, P.E. and the on-site construction supervisor was William H. Hensley. Construction surveying services were completed by Marc Leichti and Bill Stafford of Billmayer Engineering, Kalispell, Montana.

2.4 DEQ-AMRB Coordination

The Project Manger was Jack O. Yates, Department of Environmental Quality, Abandoned Mine Reclamation Bureau.

3.0 DESCRIPTION OF RECLAMATION CONTRACT

3.1 Contract Administration

This section includes a brief discussion of the project bidding phase, a summary of milestone dates for particular construction events, and a description of Work Directive Changes and Change Orders issued. Additional information is provided in the enclosed attachments as discussed below.

Bid Tabulations. Eight contractors submitted bids for this project. Bids ranged from $183,339 to $393,364, with an engineers estimate of $224,705.50. The bid tabulations are provided in Attachment 1.

Milestone Dates. Table 2 contains a chronological summary of milestone dates for the construction phase of this project.

Table 2.
Chronological Listing of Construction Events

Pre-Bid Conference (Town Hall, Whitefish, Montana)	May 16, 1995
Bid Opening Date	May 25, 1995
Contract Award	June 20, 1995
Pre-Construction Meeting	July 5, 1995
Notice to Proceed	July 5, 1995
Construction Start-up	July 12, 1995
Substantial Completion	September 15, 1995
Final Completion and Approval	September 27, 1995
Final Payment	December 1, 1995

Summary of Work Directive Changes and Change Orders. Three Work Directive Changes (WDCs) and two Change Orders were issued for this project. Copies of the WDCs and the Change Orders are located in Attachments 2 and 3, respectively. The WDCs are summarized below:

WDC #1	Purpose:	Increase amount of fill available for constructing side slopes for Pit #4
	Date:	July 26, 1995
WDC #2	Purpose:	Delete fencing along Lot 11E, Pit #4. Tie new fence into existing at this location.
	Date:	July 26, 1995
WDC #3	Purpose:	Increase amount of fill available for constructing side slopes for Pit #3.
	Date:	July 31, 1995

One Change Order was completed during the construction phase for this project. This resulted in a $3,134 increase in the project price and a four day increase in the construction completion date. The Change Order was issued to compensate the contractor for excavating exploration test pits in Pit #3, excavation for additional blanket drain in Pit #3, handling the diesel fuel contaminated soil in Pit #4, and double-handling 2,010 cubic yards of fill in Pit #4. The second change order was issued to address the difference in the final payment quantities versus the contract quantity estimates.

3.2 Contractor Employees and Equipment List

Jim Thoroughman of Schumaker Trucking & Excavating served as construction superintendent. The general contractor's crew also included three to six other personnel during earthwork grading. During fencing and seeding operations, the employee count varied from two to approximately five workers.

Table 3 is a list of the major equipment used for this reclamation project.

Table 3.
Major Equipment Used on Project

Type	Make/Model	No. on Job
Track Dozer	Caterpillar D8N	1
	Caterpillar D8H	2
Wheel Loader	Caterpillar 966	1

Backhoe	Caterpillar 436	1
Sheepsfoot Compactor	Bomag K300	1
Water Truck		1
Service Truck		1

3.3 Summary of Construction Activities

3.3.1 Pit #1

Earthwork construction in Pit #1 began on August 9, 1995 and was completed on August 15, 1995. Construction staking had previously been performed by Billmayer Engineering. One D8N dozer and two (2) D8H dozers were utilized to excavate benches, flatten existing side slopes and to construct a 3H:1V side slope against existing high wall.

Plan drawings called for the construction of a 125 ft. dike across the northeast corner of the pit floor. This design was based on incorrect topographic data. During construction, it became obvious that the dike was unnecessary and the surveyors were called on site to verify this observation. Steve Pierce, project engineer, instructed the contractor to eliminate the dike construction and replace it with a 3H:1V side slope.

A grass-lined swale was constructed horizontally across the face of the high wall 3H:IV side slope connecting with a vertical rip-rap lined collector ditch. These ditches emptied onto a 12 ft. x 12 ft. rip-rap outlet apron located at the toe of the slope.

An existing stockpile of approximately 500 c.y. of topsoil was mixed on site with an equal amount of wood chips which were generated during on-site clearing. The resulting cover soil was then placed in a single four inch lift on the 3H:IV side slopes surrounding the upper (southernmost) pit floor.

Minor changes in construction limits and fence alignment (see as-built drawings) were instituted to accommodate the concerns of adjoining landowners. No other problems or issues were forthcoming.

During final quantity calculations it was discovered the original topographic Pit 1 survey contained unresolvable errors. Therefore the excavation quantity used for final payment was based upon the contract excavation quantity estimate plus 5%.

In Pit #1, there was 4.1 disturbed acres, a cut/fill volume of 14,175 c.y., and 1730 l.f. of new fencing.

3.3.2 Pit #2

Earthwork construction in Pit #2 consisted of flattening the existing side slopes and leveling the pit floor. Construction began on August 15, 1995 and was completed on August 16, 1995. A single D8H dozer was utilized for all construction in Pit #2.

Approximately 60 c.y. of topsoil stripped from the north bench was mixed with site-generated wood chips and placed in a single four-inch lift on the west side slope. An existing topsoil stockpile of approximately 200 c.y. was located on the east side of the pit floor. This material was placed as cover soil in a single four inch lift on the north side slope.

No problems were encountered during construction. In Pit #2, there was 1.1 disturbed acres, a cut/fill volume of 2009 c.y., and 1063 l.f. of new fencing. These quantities are based upon the final survey provided by Billmayer Engineering.

3.3.3 Pit #3

Earthwork construction in Pit #3 began on July 31, 1995, and was completed on August 14, 1995. Two (2) D8N dozers, one (1) D8H dozer, one (1) Bomag K300 sheeps foot compactor and one CAT 436 backhoe were utilized during earthwork construction in Pit #3.

Construction consisted of the excavation of benches within the pit area and the placement of fill material against existing side slopes with the result being an area of approximately 3.5 acres of uniform elevation surrounded by 3H:IV side slopes.

Fill areas below elevation 3019 required structural compaction fill. Fill material consisted of two general types, (1) a gravelly sand and (2) a fine-grained plastic soil (clay). Proctors for each soil type were determined by laboratory tests conducted by Billmayer Engineering of Kalispell, MT.

Structural fill was placed in uniform 12 inch lifts, moisture conditioned and compacted with the Bomag K300. Nuclear moisture-density tests were performed for each 1000 c.y. of fill material in place. Areas not meeting the required 95 percent compaction were recompacted and retested until satisfactory results were achieved.

A total of four springs were identified during construction of Pit #3. Spring #1 (see as-built for locations) was identified during the design phase and the installation of a gravel blanket drain was included as part of the contract documents. Springs #2 and 3 were identified following clearing and grubbing activities. Steve Pierce directed the contractor to install an additional gravel blanket to drain both of these springs which were located within 50 ft. of each other. Payment was made at the unit contract price for gravel blanket drain with the quantities taken from haul truck tickets (load count). A total of 658 c.y. of gravel was required to construct these two drains. The final spring (#4) was identified following construction of the 3H:IV side slope. Jack Yates (DSL) instructed the contractor to excavate side slope to determine exact location of spring and then to install a third gravel blanket drain. Payment to the contractor would be for dozer time to excavate side slope and for additional gravel blanket at contract unit price. A total of 150 c.y. of gravel blanket was required to construct the drain for spring #4. Gravel for the gravel blankets was obtained off site at the Hamilton Pit near Columbia Falls, MT.

A grass lined swale was constructed at mid-slope of the north facing 3H:IV side slope (see as-built for location) connecting with a rip-rap lined vertical ditch which empties onto a 12' x 12' rip-rap outlet apron. Rip-rap was obtained off site at the Weaver Pit near Columbia Falls, MT.

Several large cottonwood trees located on the side slopes were preserved by placing fill around them, in effect burying the tree trunks a vertical distance of 10 to 15 ft. Areas around the trees were flattened by hand work to facilitate the capture and retention of moisture.

Straw bales were placed along the property line of lot 4 DAC to prevent off-site erosion. A total of 301 c.y. of topsoil was stockpiled, mixed with wood chips generated on site, and placed in a uniform four-inch lift on the side slope adjoining Birch Point road.

In Pit #3, there was 6.6 disturbed acres, a cut/fill volume of 27,271 c.y., and 2341 l.f. of new fencing. These quantities are based upon the final survey provided by Billmayer Engineering.

3.3.4 Pit #4

Earthwork construction in Pit #4 commenced on July 11, 1995 and was completed on July 31, 1995. Heavy equipment employed in construction of Pit #4 included one (1) D8N dozer, one (1) D8H dozer, one (1) Bomag K300 sheep's foot compactor, one (1) Cat 966 loader and one (1) water truck.

Construction consisted primarily of excavating existing benches within the pit, flattening existing side slopes and constructing 3H:IV side slopes against existing high walls. Areas within the pit below elevation 3034 received structural fill placed in uniform 6" lifts. Compaction requirements were monitored by nuclear moisture-density tests performed at specified intervals by the engineers representative (see Field Density Test Summary for test results).

All fill material was generated on site and consisted of sand, gravel, silt and clay. Proctors for each soil type were determined by laboratory testing performed by Billmayer Engineering of Kalispell, Montana.

The final elevation of the pit floor in Pit #4 was lowered to 3034 feet to achieve a balance between earthwork cut and fill quantities. The original estimate was based on the assumption that the predominate soil types would consist of gravels and sands. This proved not to be the case as approximately one-half of the soils encountered were silts and clays.

The contractor was informed of the design change to lower the pit floor on the morning of July 20, 1995. Some areas at the east end of the pit had been filled and compacted to an elevation of approximately 3036 prior to this notification. The surveyors (Billmayer Engineering) were called to the site and directed to topo all areas of Pit #4 above elevation 3034. The contractor was compensated for material that was handled twice as a result of this design change (see Section 3.1 Summary of Work Directive Change and Change Orders.)

During the excavation of soils near the location of underground storage tanks owned and

previously removed by Flathead County, soils contaminated with what appeared to be diesel fuel were encountered. The contractor immediately suspended excavation in this area and the engineer was notified.

On July 19, 1995 Jack Yates (DSL), Mike Trombetta (UST) and Jim Murrell (Flathead County Health Dept.) were on site to investigate the contaminated soils. It was determined that the soil should be excavated, placed on plastic sheeting, and stockpiled on site until a final disposition could be arranged. Jim Murrell returned on July 20, 1995 to determine the limits of contamination and on July 27 the identified soils were excavated and stockpiled near the southeast corner of Pit #4. A temporary earthen berm was constructed around the perimeter of the stockpile to prevent the migration of contaminants.

Following completion of final grading, approximately 364 cubic yards of topsoil was mixed with an equivalent amount of wood chips generated on site and placed in a uniform 4" lift on the east facing side slope near the Baker Avenue road extension. Straw bales were placed at locations shown on plan drawings to prevent off-site drainage.

A short delay in construction activity followed the completion of the fence. The contractor requested a change in the specified seeding date of October 15. Jack Yates (DEQ/AMRB) granted the request and Prairie Hydroseeding was notified to proceed. Prairie Hydroseeding of Havre began to mobilize equipment to the site on September 4, 1995, but actual seeding operations did not begin until September 8, 1995.

Seedbed preparation was accomplished by the use of a 10' John Deere disk propelled by an 80 h.p. Allis-Chalmers farm tractor. Soils in general were think, moist, and rocky. Fertilizer and seed were applied simultaneously with a John Deere 9350 drill seeder propelled on the flatter areas by the Allis-Chalmers tractor and on steeper areas by an International TD-7 dozer. A total of 3500 lbs. of 16-20-0 fertilizer and 570 lbs of the specified seed mixture were applied to the approximate 16.7 acres of surface area.

Seeded areas were then mulched with the application of certified weed-free barley straw at a rate o 3,000 lbs. per acre. Straw was applied with a trailer mounted blower and anchored by a mulch tilled crimper. A total of approximately 55,460 lbs. of straw was applied to the combined 16.7 acres of surface area. Fertilizing, seeding and mulching operations were completed on September 15, 1995.

In Pit #4, there was 4.9 disturbed acres, a cut/fill volume of 38,067 c.y., and 1410 l.f. of new fencing. These quantities are based upon the final survey provided by Billmayer Engineering.

4.0 COST SUMMARY

4.1 Summary of Construction Costs

One construction progress payment was made for this project. The Final Payment Request details

the final construction quantities and costs for each pit. Copies of the payment requests are provided in Attachment 4. Table 4 has been prepared to show the final construction costs for each pit on the basis of disturbed acreage.

Table 4.
Final Construction Costs - Acreage Basis

Site	Disturbed Acres	Cost/acre	Total Construction Cost
Pit #1	4.1	$7764.51	$31,834.50
Pit #2	1.1	$9179.82	$10,097.80
Pit #3	6.6	$10,359.36	$68,371.80
Pit #4	4.9	$13,592.10	$66,601.30

Total Construction Cost. The original bid price for this project was $183,339.00, with one change order in the amount of $3,134.00, making the new contract price $186,473.00. The final construction cost for the project was $180,039.40 based on measured quantities.

4.2 Summary of Engineering and Total Project Costs

Engineering costs for design and construction oversight, and surveying are summarized in Table 5. An analysis of the engineering costs versus construction costs, and total project cost are also included.

Table 5.
Project Engineering Costs

Engineering Service	Amount
Design Engineering (including design surveying)	$84,268.94
Construction Oversight, Administration and Surveying	$72,447.93
Total Project Engineering Cost	$156,716.87
Percentage Engineering Fees to Construction Cost:	
Design Engineering / Construction Cost	47%
Construction Engineering / Construction Cost	40%
Total Project Engineering / Construction Cost	87%
Total Project Cost (Engineering and Construction):	**$336,756.27**

5.0 PROJECT COMPLETION

5.1 Site Condition After Completion

Pits #1, #2, #3, and #4 are graded, seeded, mulched, and crimped as specified in the design. All four gates to the pits are locked. The contaminated soil pile in Pit #4 remains in the southeast corner. Also the southern and eastern boundaries of Pit #4 are continuously being altered due to the construction of the Baker Avenue road extension.

5.2 As-Constructed Drawings

The original drawings have been modified to reflect changes that occurred in the field. The as-built drawings are provided in Attachment 5. Note that as-built information has been added only to sheets that are most appropriate to document the changes.

5.3 Maintenance and Follow-up

The reclaimed sites should require little maintenance work in the future. AMRB should, however, monitor the sites for the spread of weeds. In addition, it would be worthwhile to monitor the condition of the existing, large cottonwood trees that remain in Pit #3. Fill was placed around the tree trunks to a height of up to 15 feet, as directed by Jack Yates of AMRB.

5.4 Comments and Suggestions

We have several suggestions that may improve the construction process. First, we strongly recommend that the engineer perform some limited subsurface exploration during the design phase. This will improve the cut/fill balance estimate, and help the contractor anticipate soil conditions. Second, we recommend that in the future AMRB consider making most of the construction surveying the responsibility of the contractor. The engineer should still be responsible for initial surveying control, layout, and payment quantities, but the normal, day-to-day surveying can be completed more cost-effectively by the contractor. Third, surveyors should field verify original topographic maps prior to the design process. This will ensure that the topographic map used for a design basis is a reasonable representation of the site.

5.5 Photographs and Slides

Photographs were taken before construction, during the various construction phases, and after completion of the pits. The major equipment used on the project was also photographed. These photographs and their corresponding slides are in Attachment 7.

Attachment 1:	Bid Tabulations
Attachment 2:	Work Directive Changes
Attachment 3:	Change Orders
Attachment 4:	Payment Requests
Attachment 5:	As-Built Drawings
Attachment 6:	Structural Fill Density Test Summary
Attachment 7:	Photographs and Slides

ATTACHMENT 1:

Bid Tabulations

WHITEFISH SAND & GRAVEL PIT #1
LAKE COUNTY, MONTANA

DSL/AMRB 94-004
May 25, 1995

BID TABULATIONS				ENGINEER'S ESTIMATE		SHUMAKER TRUCKING & EXCAVATING		SCHLEGEL & SONS		LHC INC.	
Item Number	Estimated Quantity	Unit	Description	Unit Price	Total Price						
1.	1	LS	Mobilization	6000	6,000.00	2500.00	2,500.00	775.00	775.00	1688.00	1,688.00
2.	1	LS	Wood Debris Chipping	2000	2,000.00	6600.00	6,600.00	3600.00	3,600.00	7831.00	7,831.00
3.	13500	CY	Excavation/Embankment	1.25	16,875.00	.90	12,150.00	1.25	16,875.00	1.00	13,500.00
4.		CY	Gravel Blanket Drain	0	0.00	0	0.00	0	0.00	0	0.00
5.	400	CY	Cover Soil Rehandling	$3.00	1,200.00	3.00	1,200.00	1.65	660.00	4.00	1,600.00
6.	1	LS	Riprap 12" Minus	900	900.00	2400.00	2,400.00	1350.00	1,350.00	2400.00	2,400.00
7.	4.2	AC	Seeding and Fertilizing	500	2,100.00	500.00	2,100.00	545.00	2,289.00	655.00	2,751.00
8.	4.2	AC	Mulching	1000	4,200.00	400.00	1,680.00	595.00	2,499.00	715.00	3,003.00
9.	1825	LF	Fencing Type F-4(M)	1.50	2,737.50	1.90	3,467.50	1.83	3,339.75	2.20	4,015.00
10.	1	Ea	Hinged Metal Gate	500	500.00	600.00	600.00	513.50	513.50	620.00	620.00
11.	140	Ea	Straw Bales - Erosion Control	10	1,400.00	10.00	1,400.00	10.73	1,502.20	13.00	1,820.00
12.		LS	Structural Compaction	0	0.00	0	0.00	0	0.00	0	0.00
13.	0	LS	MPDES Stormwater Permit	0	0.00	0	0.00	0	0.00	0	0.00
					0.00		0.00		0.00		0.00
THIS ROW CONTAINS FORMULAS FOR ADDING UP THE COLUMNS -- INSERT ROWS ABOVE THIS ONE IF YOU NEED MORE THAN 7 ITEMS				0.00	37,912.50		34,097.50		33,403.45		39,228.00

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USE SECOND SHEET IF MORE THAN 4 BIDDERS

WHITEFISH SAND & GRAVEL PIT #1
LAKE COUNTY, MONTANA

DSL/AMRB 94-004
May 25, 1995

BID TABULATIONS				ENGINEER'S ESTIMATE		NELCON INC.		FOSTER CONSTRUCTION		ENVIRONMENTAL RECLAMATION	
Item Number	Estimated Quantity	Unit	Description	Unit Price	Total Price						
1.	1	LS	Mobilization	6000	6,000.00	6000.00	6,000.00	3000.00	3,000.00	6394.00	6,394.00
2.	1	LS	Wood Debris Chipping	900	2,000.00	5000.00	5,000.00	5600.00	5,600.00	5688.00	5,688.00
4.	13500	CY	Excavation/Embankment	1.25	16,875.00	1.65	22,275.00	1.38	18,630.00	1.58	21,330.00
4.		CY	Gravel Blanket Drain	0	0.00	0	0.00	0	0.00	0	0.00
5.	400	CY	Cover Soil Rehandling	$3.00	1,200.00	1.75	700.00	.80	320.00	1.75	700.00
6.	1	LS	Riprap 12" Minus	900	900.00	1000.00	1,000.00	2800.00	2,800.00	3000.00	3,000.00
7.	4.2	AC	Seeding and Fertilizing	500	2,100.00	600.00	2,520.00	545.00	2,289.00	1200.00	5,040.00
8.	4.2	AC	Mulching	900	4,200.00	655.00	2,751.00	595.00	2,499.00	1000.00	4,200.00
9.	1825	LF	Fencing Type F-4(M)	1.50	2,737.50	3.35	6,113.75	1.85	3,376.25	1.65	3,011.25
10.	1	Ea	Hinged Metal Gate	500	500.00	750.00	750.00	550.00	550.00	200.00	700.00
11.	140	Ea	Straw Bales - Erosion Control	500	1,400.00	6.50	1,000.00	6.80	952.00	6.10	854.00
12.		LS	Structural Compaction	0	0.00	0	0.00	0	0.00	0	0.00
12.	0	LS	MPDES Stormwater Permit	0	0.00	0	0.00	0	0.00	0	0.00
					0.00		0.00		0.00		0.00
THIS ROW CONTAINS FORMULAS FOR ADDING UP THE COLUMNS -- INSERT ROWS ABOVE THIS ONE IF YOU NEED MORE THAN 7 ITEMS				0.00	37,912.50		48,019.75		40,016.25		50,417.25

G:\RECLAM\AMRB\BID-TAB.TBL -- SAVE TO DIFFERENT NAME (PROJECT NAME) WHEN USED
USE SECOND SHEET IF MORE THAN 4 BIDDERS

WHITEFISH SAND & GRAVEL PIT #1
LAKE COUNTY, MONTANA

DSL/AMRB 94-004
May 25, 1995

BID TABULATIONS				ENGINEER'S ESTIMATE		21 CONSTRUCTION		MONTGOMERY CONSTRUCTION			
Item Number	Estimated Quantity	Unit	Description	Unit Price	Total Price						
1.	1	LS	Mobilization	6000	6,000.00	4000.00	4,000.00	12800.00	12,800.00		0.00
2.	1	LS	Wood Debris Chipping	2000	2,000.00	500.00	3,000.00	3800.00	3,800.00		0.00
4.	13500	CY	Excavation/Embankment	1.25	16,875.00	1.90	25,650.00	2.35	31,725.00		0.00
4.		CY	Gravel Blanket Drain	0	0.00	0	0.00	0	0.00	0	0.00
9.	400	CY	Cover Soil Rehandling	$3.00	1,200.00	3.00	1,200.00	5.00	2,000.00		0.00
9.	1	LS	Riprap 12" Minus	1000	900.00	3000.00	3,000.00	4000.00	4,000.00		0.00
4.	4.2	AC	Seeding and Fertilizing	500	2,100.00	500.00	2,100.00	500.00	2,100.00		0.00
8.	4.2	AC	Mulching	1000	4,200.00	500.00	2,100.00	900.00	3,780.00		0.00
9.	1825	LF	Fencing Type F-4(M)	1.50	2,737.50	2.00	3,650.00	2.00	3,650.00		0.00
10.	1	Ea	Hinged Metal Gate	500	500.00	500.00	300.00	1200.00	1,200.00		0.00
11.	140	Ea	Straw Bales - Erosion Control	500	1,400.00	500.00	2,800.00	20.00	2,800.00		0.00
12.		LS	Structural Compaction	0	0.00	0	0.00	0	0.00	0	0.00
10.	0	LS	MPDES Stormwater Permit	0	0.00		0.00		0.00		0.00
					0.00		0.00		0.00		0.00
THIS ROW CONTAINS FORMULAS FOR ADDING UP THE COLUMNS -- INSERT ROWS ABOVE THIS ONE IF YOU NEED MORE THAN 7 ITEMS				0.00	37,912.50		52,800.00		67,855.00		0.00

G:\RECLAM\AMRB\BID-TAB.TBL -- SAVE TO DIFFERENT NAME (PROJECT NAME) WHEN USED
USE SECOND SHEET IF MORE THAN 4 BIDDERS

WHITEFISH SAND & GRAVEL PIT #2
LAKE COUNTY, MONTANA

DSL/AMRB 94-004
May 25, 1995

BID TABULATIONS				ENGINEER'S ESTIMATE		SHUMAKER		SCHLEGEL & SONS		LHC INC.	
Item Number	Estimated Quantity	Unit	Description	Unit Price	Total Price						
1.	1	LS	Mobilization	6000	6,000.00	1000.00	1,000.00	775.00	775.00	650.00	650.00
2.	1	LS	Wood Debris Chipping	1000	1,000.00	3500.00	3,500.00	3000.00	3,000.00	5400.00	5,400.00
7.	2000	CY	Excavation/Embankment	1.25	2,500.00	.90	560.00	1.25	2,500.00	2.00	4,000.00
7.		CY	Gravel Blanket Drain	0	0.00	0	0.00	0	0.00	0	0.00
5.	300	CY	Cover Soil Rehandling	3.00	900.00	.90	900.00	1.65	495.00	2.65	795.00
6.	0	LS	Riprap 12" Minus	0	0.00	0	0.00	0	0.00	0	0.00
7.	1.4	AC	Seeding and Fertilizing	400	560.00	500.00	700.00	600.00	840.00	720.00	1,008.00
8.	1.4	AC	Mulching	1000	1,400.00	400.00	560.00	650.00	910.00	780.00	1,092.00
9.	1135	LF	Fencing Type F-4(M)	1.50	1,702.50	1.90	2,156.50	3.56	4,040.60	4.00	4,540.00
10.	1	Ea	Hinged Metal Gate	400	500.00	1000.00	1000.00	513.50	513.50	600.00	600.00
11.	0	Ea	Straw Bales - Erosion Control	0	0.00	0	0.00	0	0.00	0	0.00
12.	0	LS	Structural Compaction	0	0.00	0	0.00	0	0.00	0	0.00
13.	0	LS	MPDES Stormwater Permit	0	0.00	0	0.00	0	0.00	0	0.00
					0.00		0.00		0.00		0.00
THIS ROW CONTAINS FORMULAS FOR ADDING UP THE COLUMNS -- INSERT ROWS ABOVE THIS ONE IF YOU NEED MORE THAN 7 ITEMS				0.00	14,562.50		11,216.50		13,074.10		18,085.00

G:\RECLAM\AMRB\BID-TAB.TBL -- SAVE TO DIFFERENT NAME (PROJECT NAME) WHEN USED
USE SECOND SHEET IF MORE THAN 4 BIDDERS

WHITEFISH SAND & GRAVEL PIT #2
LAKE COUNTY, MONTANA

DSL/AMRB 94-004
May 25, 1995

BID TABULATIONS				ENGINEER'S ESTIMATE		NELCON INC.		FOSTER		ENV. RECLAMATION	
Item Number	Estimated Quantity	Unit	Description	Unit Price	Total Price						
1.	1	LS	Mobilization	6000	6,000.00	4000.00	4,000.00	1030.00	1,030.00	1058.00	1,058.00
2.	1	LS	Wood Debris Chipping	1000	1,000.00	2500.00	2,500.00	4000.00	4,000.00	3494.00	3,494.00
3.	2000	CY	Excavation/Embankment	1.25	2,500.00	1.65	3,300.00	1.10	2,200.00	1.58	3,160.00
4.		CY	Gravel Blanket Drain	0	0.00	0	0.00	0	0.00	0	0.00
5.	300	CY	Cover Soil Rehandling	$3.00	900.00	1.75	525.00	.80	240.00	1.75	525.00
6.	0	LS	Riprap 12" Minus	0	0.00	0	0.00	0	0.00	0	0.00
7.	1.4	AC	Seeding and Fertilizing	400	560.00	660.00	924.00	600.00	840.00	1200.00	1,680.00
8.	1.4	AC	Mulching	1000	1,400.00	715.00	1,001.00	650.00	910.00	1000.00	1,400.00
9.	1135	LF	Fencing Type F-4(M)	1.50	1,702.50	3.35	3,802.25	3.60	4,086.00	1.65	1,872.75
10.	[illegible]	Ea	Hinged Metal Gate	500	500.00	750.00	750.00	550.00	550.00	1000.00	200.00
11.	0	Ea	Straw Bales - Erosion Control	0	0.00	0	0.00	0	0.00	0	0.00
12.	0	LS	Structural Compaction	0	0.00	0	0.00	0	0.00	0	0.00
13.	0	LS	MPDES Stormwater Permit	0	0.00	0	0.00	0	0.00	0	0.00
					0.00		0.00		0.00		0.00
THIS ROW CONTAINS FORMULAS FOR ADDING UP THE COLUMNS -- INSERT ROWS ABOVE THIS ONE IF YOU NEED MORE THAN 7 ITEMS				0.00	14,562.50		16,802.25		13,856.00		13,389.75

G:\RECLAM\AMRB\BID-TAB.TBL -- SAVE TO DIFFERENT NAME (PROJECT NAME) WHEN USED
USE SECOND SHEET IF MORE THAN 4 BIDDERS

WHITEFISH SAND & GRAVEL PIT #2
LAKE COUNTY, MONTANA

DSL/AMRB 94-004
May 25, 1995

BID TABULATIONS				ENGINEER'S ESTIMATE		21 CONSTRUCTION		MONTGOMERY CONSTRUCTION			
Item Number	Estimated Quantity	Unit	Description	Unit Price	Total Price						
1.	1	LS	Mobilization	6000	6,000.00	4000.00	4,000.00	5500.00	5,500.00		0.00
5.	1	LS	Wood Debris Chipping	1000	1,000.00	16000.00	16,000.00	5700.00	5,700.00		0.00
5.	2000	CY	Excavation/Embankment	1.25	2,500.00	4.00	8,000.00	2.35	4,700.00		0.00
4.		CY	Gravel Blanket Drain	0	0.00	0	0.00	0	0.00	0	0.00
5.	300	CY	Cover Soil Rehandling	3.00	900.00	4.00	900.00	5.00	1,500.00		0.00
9.	0	LS	Riprap 12" Minus	0	0.00	0	0.00	0	0.00	0	0.00
9.	1.4	AC	Seeding and Fertilizing	400	2,500.00	500.00	4,000.00	500.00	700.00		0.00
5.	1.4	AC	Mulching	500	1,000.00	500.00	900.00	900.00	1,260.00		0.00
9.	1135	LF	Fencing Type F-4(M)	1.50	1,702.50	2.00	2,270.00	2.00	2,270.00		0.00
10.	0	Ea	Hinged Metal Gate	500	500.00	4000.00	300.00	1200.00	1,200.00		0.00
11.	0	Ea	Straw Bales - Erosion Control	0	0.00	0	0.00	0	0.00	0	0.00
12.	0	LS	Structural Compaction	0	0.00	0	0.00	0	0.00	0	0.00
13.	0	LS	MPDES Stormwater Permit	0	0.00	0	0.00	0	0.00	0	0.00
					0.00		0.00		0.00		0.00
THIS ROW CONTAINS FORMULAS FOR ADDING UP THE COLUMNS -- INSERT ROWS ABOVE THIS ONE IF YOU NEED MORE THAN 7 ITEMS				0.00	14,562.50		32,870.00		22,830.00		0.00

G:\RECLAM\AMRB\BID-TAB.TBL -- SAVE TO DIFFERENT NAME (PROJECT NAME) WHEN USED
USE SECOND SHEET IF MORE THAN 4 BIDDERS

WHITEFISH SAND & GRAVEL PIT #3
LAKE COUNTY, MONTANA

DSL/AMRB 94-004
May 25, 1995

BID TABULATIONS				ENGINEER'S ESTIMATE		SHUMAKER		SCHLEGEL & SONS		LHC INC.	
Item Number	Estimated Quantity	Unit	Description	Unit Price	Total Price						
1.	1	LS	Mobilization	6000	6,000.00	2500.00	2,500.00	775.00	775.00	850.00	850.00
2.	1	LS	Wood Debris Chipping	2500	2,500.00	8475.00	8,475.00	3600.00	3,600.00	9350.00	9,350.00
3.	29500	CY	Excavation/Embankment	1.25	36,875.00	.90	26,550.00	1.25	36,875.00	.81	23,895.00
4.	530	CY	Gravel Blanket Drain	20	10,600.00	15.00	7,950.00	9.75	5,167.50	5.70	3,021.00
5.	800	CY	Cover Soil Rebandling	$3.00	2,400.00	3.00	2,400.00	1.65	1,320.00	5.25	4,200.00
6.	1	LS	Riprap 12" Minus	1500	1,500.00	2472.00	2,472.00	1550.00	1,550.00	2400.00	2,400.00
7.	7.0	AC	Seeding and Fertilizing	500	3,500.00	500.00	3,500.00	545.00	3,815.00	655.00	4,585.00
8.	7.0	AC	Mulching	1000	7,000.00	400.00	2,800.00	595.00	4,165.00	715.00	5,005.00
9.	2420	LF	Fencing Type F-4(M)	1.50	3,630.00	1.90	4,598.00	2.33	5,638.60	2.80	6,776.00
10.	1	Ea	Hinged Metal Gate	500	500.00	600.00	600.00	513.50	513.50	625.00	625.00
11.	9.	Ea	Straw Bales - Erosion Control	500	7,900.00	10.00	650.00	10.73	697.45	13.00	845.00
12.	1	LS	Structural Compaction	10000	10,000.00	6000.00	6,000.00	7375.00	7,375.00	5300.00	5,300.00
13.	0	LS	MPDES Stormwater Permit	0	0.00	0	0.00	0	0.00	0	0.00
					0.00		0.00		0.00		0.00
THIS ROW CONTAINS FORMULAS FOR ADDING UP THE COLUMNS -- INSERT ROWS ABOVE THIS ONE IF YOU NEED MORE THAN 7 ITEMS				0.00	85,155.00		68,495.00		71,492.05		66,852.00

G:\RECLAM\AMRB\BID-TAB.TBL -- SAVE TO DIFFERENT NAME (PROJECT NAME) WHEN USED
USE SECOND SHEET IF MORE THAN 4 BIDDERS

WHITEFISH SAND & GRAVEL PIT #3
LAKE COUNTY, MONTANA

DSL/AMRB 94-004
May 25, 1995

BID TABULATIONS				ENGINEER'S ESTIMATE		NELCON		FOSTER CONSTRUCTION		ENV. RECLAMATION	
Item Number	Estimated Quantity	Unit	Description	Unit Price	Total Price						
1.	1	LS	Mobilization	6000	6,000.00	4000.00	4,000.00	6000.00	6,000.00	13938.00	13,938.00
2.	1	LS	Wood Debris Chipping	2500	2,500.00	2500.00	2,500.00	4800.00	4,800.00	9408.00	9,408.00
3.	29500	CY	Excavation/Embankment	1.25	36,875.00	1.65	48,675.00	1.96	57,820.00	1.58	46,610.00
4.	530	CY	Gravel Blanket Drain	20	10,600.00	15.00	7,950.00	9.00	4,770.00	8.00	4,240.00
5.	800	CY	Cover Soil Rehandling	$3.00	2,400.00	1.75	1,400.00	.90	720.00	2.25	1,800.00
6.	1	LS	Riprap 12" Minus	1500	1,500.00	1000.00	1,000.00	3600.00	3,600.00	5000.00	5,000.00
7.	7.0	AC	Seeding and Fertilizing	500	3,500.00	600.00	4,200.00	545.00	3,815.00	1200.00	8,400.00
8.	7.0	AC	Mulching	1000	7,000.00	655.00	4,585.00	595.00	4,165.00	1000.00	1,000.00
9.	2420	LF	Fencing Type F-4(M)	1.50	3,630.00	3.35	8,107.00	2.35	5,687.00	1.65	3,993.00
10.	1	Ea	Hinged Metal Gate	500	500.00	750.00	750.00	550.00	550.00	200.00	200.00
11.	65	Ea	Straw Bales - Erosion Control	500	650.00	6.50	422.50	6.80	442.00	6.10	396.50
12.	1	LS	Structural Compaction	10000	10,000.00	1000.00	1,000.00	8900.00	8,900.00	1000.00	1,000.00
13	0	LS	MPDES Stormwater Permit	0	0.00	0	0.00	0	0.00	0	0.00
					0.00		0.00		0.00		0.00
THIS ROW CONTAINS FORMULAS FOR ADDING UP THE COLUMNS -- INSERT ROWS ABOVE THIS ONE IF YOU NEED MORE THAN 7 ITEMS				0.00	85,155.00		84,589.50		101,269.00		101,985.50

G:\RECLAM\AMRB\BID-TAB.TBL -- SAVE TO DIFFERENT NAME (PROJECT NAME) WHEN USED
USE SECOND SHEET IF MORE THAN 4 BIDDERS

WHITEFISH SAND & GRAVEL PIT #3
LAKE COUNTY, MONTANA

DSL/AMRB 94-004
May 25, 1995

BID TABULATIONS				ENGINEER'S ESTIMATE		21 CONSTRUCTION		MONTGOMERY CONSTRUCTION			
Item Number	Estimated Quantity	Unit	Description	Unit Price	Total Price						
1.	1	LS	Mobilization	10000	6,000.00	4000.00	4,000.00	14160.00	14,160.00		0.00
2.	1	LS	Wood Debris Chipping	2500	2,500.00	16000.00	16,000.00	4000.00	4,000.00		0.00
3.	29500	CY	Excavation/Embankment	1.25	36,875.00	1.90	56,050.00	2.35	69,325.00		0.00
3.	530	CY	Gravel Blanket Drain	20	10,600.00	15.00	7,950.00	40.00	21,200.00		0.00
5.	800	CY	Cover Soil Rehandling	$3.00	2,400.00	3.00	2,400.00	5.00	4,000.00		0.00
6.	1	LS	Riprap 12" Minus	1500	1,500.00	4000.00	3,000.00	5354.00	5,354.00		0.00
1.	7.0	AC	Seeding and Fertilizing	500	10,600.00	4000.00	3,500.00	500.00	3,500.00		0.00
8.	7.0	AC	Mulching	$00	7,000.00	500.00	3,500.00	900.00	6,300.00		0.00
6.	2420	LF	Fencing Type F-4(M)	1.50	3,630.00	2.00	4,840.00	2.00	4,840.00		0.00
10.	1	Ea	Hinged Metal Gate	500	500.00	300.00	300.00	1200.00	1,200.00		0.00
10.	65	Ea	Straw Bales - Erosion Control	500	650.00	20.00	3,500.00	20.00	1,300.00		0.00
12.	1	LS	Structural Compaction	10000	10,000.00	10000.00	8,500.00	16125.00	16,125.00		0.00
13.	0	LS	MPDES Stormwater Permit	0	0.00	0	0.00	0	0.00	0	0.00
					0.00		0.00		0.00		0.00
THIS ROW CONTAINS FORMULAS FOR ADDING UP THE COLUMNS -- INSERT ROWS ABOVE THIS ONE IF YOU NEED MORE THAN 7 ITEMS				0.00	85,155.00		112,840.00		151,304.00		0.00

G:\RECLAM\AMRB\BID-TAB.TBL -- SAVE TO DIFFERENT NAME (PROJECT NAME) WHEN USED
USE SECOND SHEET IF MORE THAN 4 BIDDERS

WHITEFISH SAND & GRAVEL PIT #4
LAKE COUNTY, MONTANA

DSL/AMRB 94-004
May 25, 1995

BID TABULATIONS				ENGINEER'S ESTIMATE		SHUMAKER		SCHLEGEL & SONS		LHC INC.	
Item Number	Estimated Quantity	Unit	Description	Unit Price	Total Price						
1.	1	LS	Mobilization	6000	6,000.00	2500.00	2,500.00	7106.00	7,106.00	850.00	850.00
2.	1	LS	Wood Debris Chipping	3500	3,500.00	8800.00	8,800.00	4080.00	4,080.00	8730.00	8,730.00
3.	35500	CY	Excavation/Embankment	1.25	44,375.00	.90	31,950.00	1.25	44,375.00	1.20	42,600.00
4.	0	CY	Gravel Blanket Drain	0	0.00	0	0.00	0	0.00	0	0.00
5.	500	CY	Cover Soil Rehandling	$3.00	1,500.00	3.00	1,500.00	1.65	825.00	4.75	2,375.00
6.	0	LS	Riprap 12" Minus	00	0.00	0	0.00	0	0.00	0	0.00
7.	5.5	AC	Seeding and Fertilizing	500	2,750.00	500.00	2,750.00	565.00	3,107.50	680.00	3,740.00
8.	5.5	AC	Mulching	$00	5,500.00	400.00	2,200.00	610.00	3,355.00	732.00	4,026.00
9.	3200	LF	Fencing Type F-4(M)	1.50	4,800.00	1.90	6,080.00	2.10	6,720.00	2.50	8,000.00
10.	1	Ea	Hinged Metal Gate	500	500.00	600.00	600.00	513.50	513.50	600.00	600.00
11.	250	Ea	Straw Bales - Erosion Control	10	2,500.00	400.00	2,500.00	10.73	2,682.50	12.00	8,000.00
12.	1	LS	Structural Compaction	15000	15,000.00	10000.00	10,000.00	7810.00	7,810.00	21000.00	21,000.00
13.	1	LS	MPDES Stormwater Permit	650	650.00	650.00	650.00	650.00	650.00	650.00	650.00
					0.00		0.00		0.00		0.00
				0.00	87,075.00		69,530.00		81,224.50		95,571.00
THIS ROW CONTAINS FORMULAS FOR ADDING UP THE COLUMNS -- INSERT ROWS ABOVE THIS ONE IF YOU NEED MORE THAN 7 ITEMS				TOTAL0.00	224,705.50		183,339.00		199,194.10		219,736.00

WHITEFISH SAND & GRAVEL PIT #4
LAKE COUNTY, MONTANA

DSL/AMRB 94-004
May 25, 1995

BID TABULATIONS				ENGINEER'S ESTIMATE		NELCON		FOSTER CONSTRUCTION		ENVIRONMENTAL RECLAMATION	
Item Number	Estimated Quantity	Unit	Description	Unit Price	Total Price						
1.	1	LS	Mobilization	6000	6,000.00	5000.00	5,000.00	6000.00	6,000.00	16560.00	16,560.00
2.	1	LS	Wood Debris Chipping	3500	3,500.00	5000.00	5,000.00	6680.00	6,680.00	13440.00	13,440.00
4.	35500	CY	Excavation/Embankment	1.25	44,375.00	1.65	58,575.00	1.84	65,320.00	1.58	56,090.00
4.	0	CY	Gravel Blanket Drain	0	0.00	0	0.00	0	0.00	0	0.00
8.	500	CY	Cover Soil Rehandling	$3.00	1,500.00	1.75	875.00	.80	400.00	2.25	1,125.00
8.	0	LS	Riprap 12" Minus	0	0.00	0	0.00	0	0.00	0	0.00
4.	5.5	AC	Seeding and Fertilizing	500	2,750.00	667.00	3,668.50	565.00	3,107.50	1200.00	6,600.00
8.	5.5	AC	Mulching	1000	3,500.00	722.00	3,971.00	610.00	3,355.00	1000.00	5,500.00
8.	3200	LF	Fencing Type F-4(M)	1.50	4,800.00	3.35	10,720.00	2.10	6,720.00	1.65	5,280.00
12.	1	Ea	Hinged Metal Gate	15000	500.00	750.00	750.00	550.00	550.00	200.00	200.00
12.	250	Ea	Straw Bales - Erosion Control	500	2,500.00	6.50	1,625.00	6.80	1,700.00	6.10	1,525.00
12.	1	LS	Structural Compaction	15000	15,000.00	1500.00	1,500.00	9800.00	9,800.00	1000.00	1,000.00
13.	1	LS	MPDES Stormwater Permit	1000	650.00	650.00	650.00	650.00	650.00	650.00	650.00
					0.00		0.00		0.00		0.00
				0.00	87,075.00		92,334.50		104,282.50		107,970.00
THIS ROW CONTAINS FORMULAS FOR ADDING UP THE COLUMNS -- INSERT ROWS ABOVE THIS ONE IF YOU NEED MORE THAN 7 ITEMS				TOTAL0.00	224,705.50		241,746.00		259,423.75		273,762.50

WHITEFISH SAND & GRAVEL PIT #4
LAKE COUNTY, MONTANA

DSL/AMRB 94-004
May 25, 1995

BID TABULATIONS				ENGINEER'S ESTIMATE		21 CONSTRUCTION		MONTGOMERY CONSTRUCTION			
Item Number	Estimated Quantity	Unit	Description	Unit Price	Total Price						
1.	1	LS	Mobilization	6000	6,000.00	4000.00	4,000.00	18000.00	6,000.00		0.00
2.	1	LS	Wood Debris Chipping	3500	3,500.00	10000.00	10,000.00	900.00	5,000.00		0.00
4.	35500	CY	Excavation/Embankment	1.25	44,375.00	1.90	67,450.00	2.35	83,425.00		0.00
4.	0	CY	Gravel Blanket Drain	00	0.00	0	0.00	0	0.00	0	0.00
8.	500	CY	Cover Soil Rehandling	$3.00	1,500.00	3.00	1,500.00	5.00	2,500.00		0.00
8.	0	LS	Riprap 12" Minus	00	0.00	0	0.00	0	0.00	0	0.00
13.	5.5	AC	Seeding and Fertilizing	500	2,750.00	500.00	2,750.00	900.00	2,750.00		0.00
8.	5.5	AC	Mulching	500	5,500.00	500.00	2,750.00	900.00	4,950.00		0.00
8.	3200	LF	Fencing Type F-4(M)	1.50	4,800.00	2.00	6,400.00	2.00	6,400.00		0.00
18.	1	Ea	Hinged Metal Gate	500	500.00	300.00	300.00	1200.00	1,200.00		0.00
11.	250	Ea	Straw Bales - Erosion Control	500	2,500.00	20.00	5,000.00	20.00	650.00		0.00
12.	1	LS	Structural Compaction	15000	15,000.00	10000.00	6,800.00	21500.00	21,500.00		0.00
13.	1	LS	MPDES Stormwater Permit	650	650.00	4000.00	650.00	650.00	650.00		0.00
					0.00		0.00		0.00		0.00
				0.00	87,075.00		110,800.00		151,375.00		0.00
THIS ROW CONTAINS FORMULAS FOR ADDING UP THE COLUMNS -- INSERT ROWS ABOVE THIS ONE IF YOU NEED MORE THAN 7 ITEMS				TOTAL0.00	224,705.50		309,310.00		393,364.00		0.00

ATTACHMENT 2:

Work Directive Changes

WORK DIRECTIVE CHANGE

(Instructions on Reverse Side) No. 1

PROJECT: *Whitefish Sand and Gravel Pits #1 through #4 Reclamation Project*

DATE OF ISSUANCE: *July 26, 1995*

CONTRACTOR:
Shumaker Trucking and Excavating Contractors Inc.
P.O. Box 1442
Great Falls, MT 59403

OWNER: *DEQ-AMRB*

DEQ-AMRB: *Jack O. Yates*

CONTRACT FOR: *Construction*

ENGINEER: *ESA Consultants Inc.*

You are directed to proceed promptly with the following change(s):

Description: *Attached.*

Purpose of Work Directive Change: *Increase amount of fill available for constructing side slopes as described in the Plans.*

Attachments: (list documents supporting change) *Complete description of changes.*

If a claim is made that the above change(s) have affected Contract Price or Contract Time, any claim for a Change Order based thereon will involve one of the following methods of determining the effect of the change(s).

Method of determining change in Contract Price:

- [ ] Time and Materials
- [x] Unit Prices
- [ ] Cost Plus Fixed Fee
- [ ] Other _____

Estimated increase (decrease) in Contract Price: $ 10,809 . If the change involves an increase, the estimated amount is not to be exceeded without further authorization.

Method of determining change in Contract Time:

- [ ] Contractor's Records
- [x] Engineer's Records
- [ ] Other _____

Estimated increase (decrease) in Contract Time: 4 days. If the change involves an increase, the estimated time is not to be exceeded without further authorization.

RECOMMENDED:

By: _____
Engineer

ACCEPTED:

By: _____
Contractor

AUTHORIZED:

By _____
Owner

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INSTRUCTIONS

A. GENERAL INFORMATION

This document was developed for use in situations involving changes in the Work which, if not processed expeditiously, might delay the Project. These changes are often initiated in the field and may affect the Contract Price or the Contract Time. This is not a Change Order, but only a directive to proceed with Work that may be included in a subsequent Change Order.

For supplemental instructions and minor changes not involving a change in the Contract Price or the Contract Time, a Field Order may be issued.

B. COMPLETING THE WORK DIRECTIVE CHANGE

Engineer initiates the form, including a description of the items involved and attachments.

Based on conversations between Engineer and Contractor, Engineer completes the following:

> METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT PRICE: Mark the method to be used in determining the final cost of Work involved and the net effect on the Contract Price. If the change involves an increase in the Contract Price and the estimated amount is approached before the additional or changed work is completed, another Work Directive Change must be issued to change the time or Contractor may stop the changed Work when the estimated time is reached. If the Work Directive Change is not likely to change the Contract Price, the space for estimated increase (decreased) should be marked "Not Applicable".
>
> METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT TIME: Mark the method to be used in determining the change in Contract Time and the estimated increase or decrease in Contract Time. If the change involves and increase in the Contract Time and the estimated time is approached before additional or changed Work is completed, another Work Directive Change must be issued to change the time or Contractor may stop the changed Work when the estimated time is reached. If the Work Directive Change is not likely to change the Contract Time, the space for estimated increase (decrease) should be marked "Not Applicable".

Once Engineer has completed and signed the form, all copies should be sent to Owner for authorization because Engineer alone does not have authority to authorize changes in Price or time. Once authorized by Owner, a copy should be sent by Engineer to Contractor.

Once the Work covered by this directive is completed for final cost and time determined, Contractor should submit documentation for inclusion in a Change Order.

THIS IS A DIRECTIVE TO PROCEED WITH A CHANGE THAT MAY AFFECT THE CONTRACT PRICE OR THE CONTRACT TIME. A CHANGE ORDER, IF ANY, SHOULD BE CONSIDERED PROMPTLY.

ATTACHMENT TO
WORK DIRECTIVE CHANGE NO. 1
WHITEFISH SAND AND GRAVEL PITS #1 THROUGH #4
RECLAMATION PROJECT

Description of Changes:

1. Lower final floor elevation of Pit #4 from elevation 3038.0 (as shown on the Plans) to elevation 3034.0. Side slopes shall be extended at 3(H):1(V) to match new floor elevation.

2. Adjust location of slope along west side of Pit #4 (slope is adjacent to east side of Lots 1-Resub and 2-Resub). Adjust top of slope 10 feet west of location shown on the Plans. Maintain slope at 3(H):1(V) to catch the final pit floor elevation.

3. Adjust location of slope along north side of Pit #4 (slope is adjacent to south side of Lot 11E). Adjust top of slope 10 feet north of location shown on the Plans. Maintain slope at 3(H):1(V) to catch the final pit floor elevation.

4. Re-excavate 2,010 cubic yards of fill that was placed above elevation 3034 prior to implementation of this Work Directive. Haul material and place in required fill area. Contractor shall be paid $0.90 per cubic yard for this additional work.

WORK DIRECTIVE CHANGE

(Instructions on Reverse Side) No. 2

PROJECT: *Whitefish Sand and Gravel Pits #1 through #4 Reclamation Project*

DATE OF ISSUANCE: *July 26, 1995*

CONTRACTOR:
Shumaker Trucking and Excavating Contractors Inc.
P.O. Box 1442
Great Falls, MT 59403

OWNER: *DEQ-AMRB*

DEQ-AMRB: *Jack O. Yates*

CONTRACT FOR: *Construction*

ENGINEER: *ESA Consultants Inc.*

You are directed to proceed promptly with the following change(s):

Description: *Delete fencing along Closson Property (Lot 11E), Pit #4. Tie new fence into existing fence at this location as shown on attached sheet and as directed in the field.*

Purpose of Work Directive Change: *Utilize existing fence.*

Attachments: (list documents supporting change) *Map showing approximate limits of fencing to be deleted from project.*

If a claim is made that the above change(s) have affected Contract Price or Contract Time, any claim for a Change Order based thereon will involve one of the following methods of determining the effect of the change(s).

Method of determining change in Contract Price:

- [ ] Time and Materials
- [x] Unit Prices
- [ ] Cost Plus Fixed Fee
- [ ] Other _____

Estimated increase (decrease) in Contract Price: $ (825.00). If the change involves an increase, the estimated amount is not to be exceeded without further authorization.

Method of determining change in Contract Time:

- [ ] Contractor's Records
- [x] Engineer's Records
- [ ] Other _____

Estimated increase (decrease) in Contract Time: 0 days. If the change involves an increase, the estimated time is not to be exceeded without further authorization.

RECOMMENDED:

By: _____
Engineer

AUTHORIZED:

By _____
Owner

ACCEPTED:

By: _____
Contractor

Rev. 3/91

INSTRUCTIONS

A. GENERAL INFORMATION

This document was developed for use in situations involving changes in the Work which, if not processed expeditiously, might delay the Project. These changes are often initiated in the field and may affect the Contract Price or the Contract Time. This is not a Change Order, but only a directive to proceed with Work that may be included in a subsequent Change Order.

For supplemental instructions and minor changes not involving a change in the Contract Price or the Contract Time, a Field Order may be issued.

B. COMPLETING THE WORK DIRECTIVE CHANGE

Engineer initiates the form, including a description of the items involved and attachments.

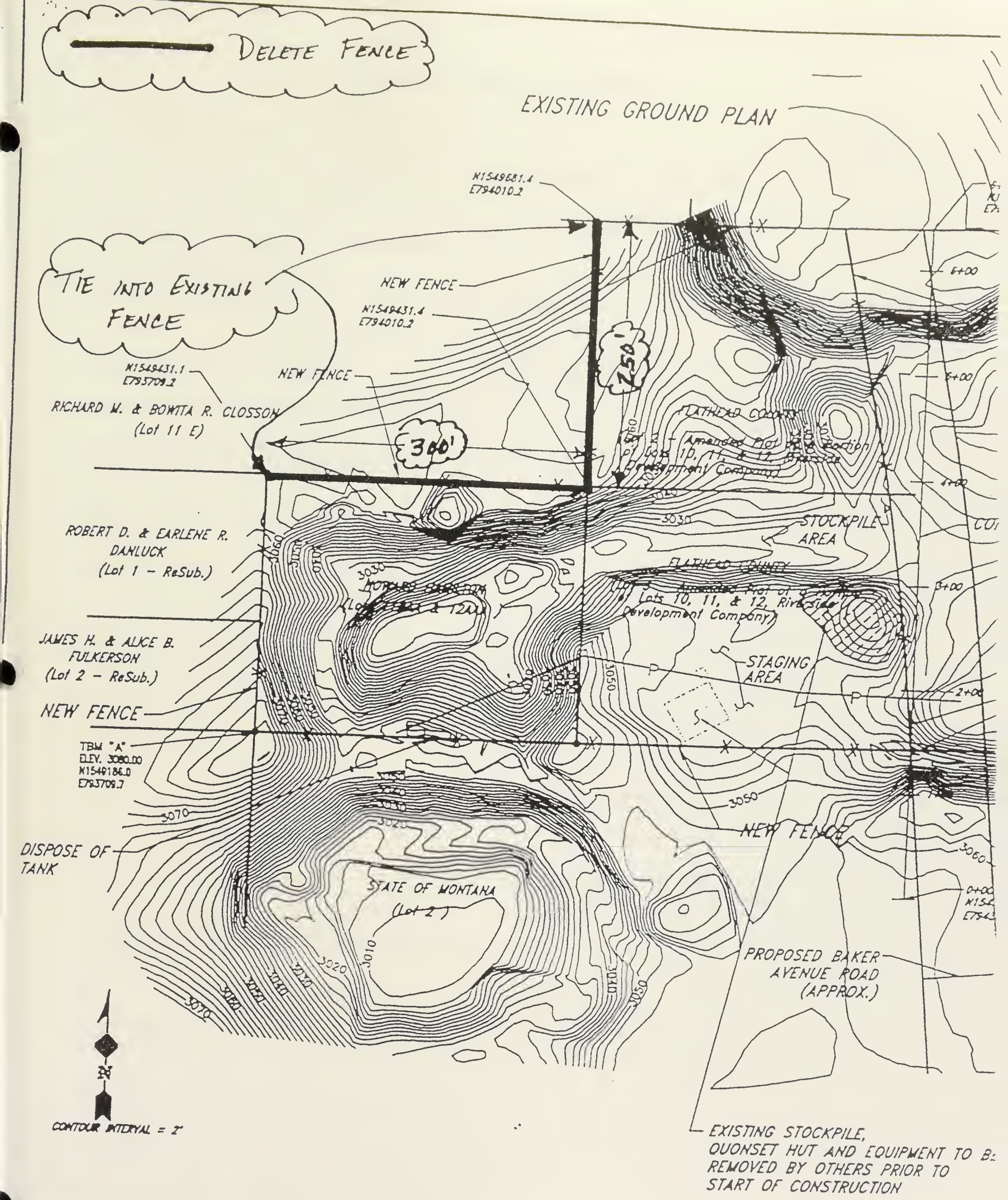
Based on conversations between Engineer and Contractor, Engineer completes the following:

> METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT PRICE: Mark the method to be used in determining the final cost of Work involved and the net effect on the Contract Price. If the change involves an increase in the Contract Price and the estimated amount is approached before the additional or changed work is completed, another Work Directive Change must be issued to change the time or Contractor may stop the changed Work when the estimated time is reached. If the Work Directive Change is not likely to change the Contract Price, the space for estimated increase (decreased) should be marked "Not Applicable".
>
> METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT TIME: Mark the method to be used in determining the change in Contract Time and the estimated increase or decrease in Contract Time. If the change involves and increase in the Contract Time and the estimated time is approached before additional or changed Work is completed, another Work Directive Change must be issued to change the time or Contractor may stop the changed Work when the estimated time is reached. If the Work Directive Change is not likely to change the Contract Time, the space for estimated increase (decrease) should be marked "Not Applicable".

Once Engineer has completed and signed the form, all copies should be sent to Owner for authorization because Engineer alone does not have authority to authorize changes in Price or time. Once authorized by Owner, a copy should be sent by Engineer to Contractor.

Once the Work covered by this directive is completed for final cost and time determined, Contractor should submit documentation for inclusion in a Change Order.

THIS IS A DIRECTIVE TO PROCEED WITH A CHANGE THAT MAY AFFECT THE CONTRACT PRICE OR THE CONTRACT TIME. A CHANGE ORDER, IF ANY, SHOULD BE CONSIDERED PROMPTLY.



BY	DATE	REVISION DESCRIPTION

SCALE
HORIZ: 1"=40' VERT: N/A
SCALE IN FEET
0 60 120

MONTANA DEPT OF STA
WHITEFISH, MONT
WHITEFISH SAND AND GR

WORK DIRECTIVE CHANGE

(Instructions on Reverse Side) No. 3

PROJECT: *Whitefish Sand and Gravel Pits #1 through #4 Reclamation Project*

DATE OF ISSUANCE: *July 31, 1995*

CONTRACTOR:
Shumaker Trucking and Excavating Contractors Inc.
P.O. Box 1442
Great Falls, MT 59403

OWNER: *DEQ-AMRB*

DEQ-AMRB: *Jack O. Yates*

CONTRACT FOR: *Construction*

ENGINEER: *ESA Consultants Inc.*

You are directed to proceed promptly with the following change(s):

Description: *Lower final floor elevation of Pit #3 from 3019.0 (as designed) to elevation 3016.0. Side slopes shall be extended at 3(H):1(V) to match new floor elevation.*

Purpose of Work Directive Change: *Increase amount of fill available for reclaiming pit as described in the Plans.*

Attachments: (list documents supporting change) *N/A.*

If a claim is made that the above change(s) have affected Contract Price or Contract Time, any claim for a Change Order based thereon will involve one of the following methods of determining the effect of the change(s).

Method of determining change in Contract Price:

- [ ] Time and Materials
- [x] Unit Prices
- [ ] Cost Plus Fixed Fee
- [ ] Other _____

Estimated increase (decrease) in Contract Price: $ 5,940.00 . If the change involves an increase, the estimated amount is not to be exceeded without further authorization.

RECOMMENDED:

By: _____
Engineer

ACCEPTED:

By: _____
Contractor

Method of determining change in Contract Time:

- [ ] Contractor's Records
- [x] Engineer's Records
- [ ] Other _____

Estimated increase (decrease) in Contract Time: 0 days. If the change involves an increase, the estimated time is not to be exceeded without further authorization.

AUTHORIZED:

By _____
Owner

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ATTACHMENT 3:

Change Orders

CHANGE ORDER

ORDER NO. 1

PROJECT TITLE: Whitefish Sand and Gravel Pits #1 through #4 Reclamation Project

MONT A/E or DSL-AMRB: DEQ-AMRB

CONTRACT DATE: June 20, 1995

OWNER: DEQ-AMRB

CONTRACTOR: Shumaker Trucking and Excavating Contractors, Inc.

Change Orders must be accompanied by an itemized cost breakdown. You are hereby requested to comply with the following changes from the Contract Documents. (Show separate costs for materials, labor, equipment, and miscellaneous. Show percent where applicable.)

ITEM NO.	DESCRIPTION OF CHANGES - ESTIMATED QUANTITIES & UNITS	COST OF CHANGES					TOTAL COST
		MAT'LS.	LABOR	EQUIP.	MISC.	TOTAL UNIT COST	
1	Double handling of 2,010 cy of fill material in Pit #4					0.90	1,809.00
2	Handling diesel fuel contaminated soil in Pit #4						
	1.5 hrs D8N Dozer					175.00	262.50
	3.5 hrs 436 Backhoe					100.00	350.00
	2.0 hrs 966 Loader					125.00	250.00
	1.0 hr 235 Excavator					175.00	175.00
3	Test pits in Pit #3						
	2.0 hrs Case 680 Backhoe					100.00	200.00
4	Excavation for additional blanket drain, Pit #3						
	0.5 hr D8N Dozer					175.00	87.50
	TOTAL COST - MATERIALS, LABOR, EQUIPMENT & MISC.						$3,134.00
	OVERHEAD & PROFIT @ _____%						Included
	GRAND TOTAL - THIS CHANGE ORDER						$3,134.00

Original Contract Price	183,339.00
Current Contract Price Adjusted by Previous Change Order	183,339.00
Cost this Change Order (+ or -_)	+3,134.00
New Contract Price including this Change Order	186,473.00

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The completion date as set forth in the Contract Documents shall be (unchanged, increased, decreased) by 4 calendar days.

The date for completion of all work will be September 14, 1995.

Description and Justification for Change:

1. Increasing amount of fill available for completing reclamation of Pit #4.

2. Handling diesel fuel contaminated soil in Pit #4.

SURETY CONSENT

The Surety hereby consents to the aforementioned Contract Change Order and agrees that its bond or bonds shall apply and extend to the Contract as thereby modified or amended per this Change Order. The Principal and the Surety further agree that on or after execution of this consent, the penalty of the applicable Performance Bonds or Bonds is hereby increased by $ 3,134.00 (100% of the Change Order amount) and the penalty of the applicable Labor and Material Bond or Bonds is hereby increased by $ 3,134.00 (100% of the Change Order amount).

COUNTERSIGNED BY MONTANA RESIDENT AGENT

SURETY

_____ _____

_____ By: _____
Seal

Recommended by: _____
Engineer Date

Accepted by: _____
Contractor Date

Approved by: _____
Owner Date

CHANGE ORDER

ORDER NO. 2

PROJECT TITLE: Whitefish Sand and Gravel Pits #1 through #4 Reclamation Project

CONTRACT DATE: June 20, 1995

OWNER: DEQ-AMRB

CONTRACTOR: Shumaker Trucking and Excavating Contractors, Inc.

Change Orders must be accompanied by an itemized cost breakdown. You are hereby requested to comply with the following changes from the Contract Documents. (Show separate costs for materials, labor, equipment, and miscellaneous. Show percent where applicable.)

Original Contract Price	183,339.00
Current Contract Price Adjusted by Previous Change Order	186,473.00
Cost this Change Order (+ or -)	-6,433.60
New Contract Price including this Change Order	180,039.40

The completion date as set forth in the Contract Documents shall be (unchanged, increased, decreased) by 0 calendar days.

The date for completion of all work will be September 14, 1995.

Description and Justification for Change: Final quantity calculations based upon final ground topographic maps.

SURETY CONSENT

The Surety hereby consents to the aforementioned Contract Change Order and agrees that its bond or bonds shall apply and extend to the Contract as thereby modified or amended per this Change Order. The Principal and the Surety further agree that on or after execution of this consent, the penalty of the applicable Performance Bonds or Bonds is hereby decreased by $ 6,433.60 (100% of the Change Order amount) and the penalty of the applicable Labor and Material Bond or Bonds is hereby decreased by $ 6,433.60 (100% of the Change Order amount).

COUNTERSIGNED BY MONTANA RESIDENT AGENT

Cogswell Agency

By: Charla M Posel

Charla M. Posel, Resident Agent

SURETY

Vigilant Insurance Company

By: Charla M Posel

Charla M Posel Seal Attorney-In-Fact

Recommended by: George E Austin 11/8/95

Engineer — Date

Accepted by: [illegible] 11/9/95

Contractor — Date

Approved by: Jack A. Jakes DEQ-AMRB 11/27/95

Owner — Date

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PIT #1

Item No.	Description	Contract Quantity	Final Quantity	Change in Quantity	Contract Unit Price	Total Change in Cost
3	Excavation/Embankment	13,500.0	14,175.0	675.0	0.90	607.50
5	Cover Soil Rehandling	400.0	0.0	(400.0)	3.00	(1,200.00)
7	Seeding and Fertilizing	4.2	4.1	(0.1)	500.00	(50.00)
8	Mulching	4.2	4.1	(0.1)	400.00	(40.00)
9	Fencing Type F-4(M)	1,825.0	1,730.0	(95.0)	1.90	(180.50)
11	Straw Bales - Erosion Control	140.0	0.0	(140.0)	10.00	(1,400.00)
	TOTALS					(2,263.00)

PIT #2

Item No.	Description	Contract Quantity	Final Quantity	Change in Quantity	Contract Unit Price	Total Change in Cost
3	Excavation/Embankment	2,000.0	2,009.0	9.0	0.90	8.10
5	Cover Soil Rehandling	300.0	60.0	(240.0)	3.00	(720.00)
7	Seeding and Fertilizing	1.4	1.1	(0.3)	500.00	(150.00)
8	Mulching	1.4	1.1	(0.3)	400.00	(120.00)
9	Fencing Type F-4(M)	1,135.0	1,063.0	(72.0)	1.90	(136.80)
	TOTALS					(1,118.70)

PIT #3

Item No.	Description	Contract Quantity	Final Quantity	Change in Quantity	Contract Unit Price	Total Change in Cost
3	Excavation/Embankment	29,500.0	27,271.0	(2,229.0)	0.90	(2,006.10)
4	Gravel Blanket Drain	530.0	808.0	278.0	15.00	4,170.00
5	Cover Soil Rehandling	800.0	301.0	(499.0)	3.00	(1,497.00)
7	Seeding and Fertilizing	7.0	6.6	(0.4)	500.00	(200.00)
8	Mulching	7.0	6.6	(0.4)	400.00	(160.00)
9	Fencing Type F-4(M)	2,420.0	2,341.0	(79.0)	1.90	(150.10)
11	Straw Bales - Erosion Control	65.0	37.0	(28.0)	10.00	(280.00)
	TOTALS					(123.20)

PIT #4

Item No.	Description	Contract Quantity	Final Quantity	Change in Quantity	Contract Unit Price	Total Change in Cost
3	Excavation/Embankment	35,500.0	38,067.0	2,567.0	0.90	2,310.30
5	Cover Soil Rehandling	500.0	364.0	(136.0)	3.00	(408.00)
7	Seeding and Fertilizing	5.5	4.9	(0.6)	500.00	(300.00)
8	Mulching	5.5	4.9	(0.6)	400.00	(240.00)
9	Fencing Type F-4(M)	3,200.0	1,410.0	(1,790.0)	1.90	(3,401.00)
11	Straw Bales - Erosion Control	250.0	161.0	(89.0)	10.00	(890.00)
	TOTALS					(2,928.70)

TOTAL CHANGE ORDER NO. 2 (6,433.60)

POWER OF ATTORNEY
VIGILANT INSURANCE COMPANY
ATTN: SURETY DEPARTMENT
15 Mountain View Road, Warren, NJ 07059
(908) 903-2000

Know all Men by these Presents, That VIGILANT INSURANCE COMPANY, a New York Corporation, has constituted and appointed, and does hereby constitute and appoint E. B. Cogswell, Jr., Lorrin A. Darby, and Charla M. Posel of Great Falls, Montana ---------- each its true and lawful Attorney-in-Fact to execute under such designation in its name and to affix its corporate seal to and deliver for and on its behalf as surety thereon or otherwise, bonds or obligations given or executed in the course of its business, and consents for the release of retained percentages and/or final estimates.

In Witness Whereof, said VIGILANT INSURANCE COMPANY has, pursuant to its By-Laws, caused these presents to be signed by its Vice President and Assistant Secretary and its corporate seal to be hereto affixed this 24th day of May, 1995.

Corporate Seal

VIGILANT INSURANCE COMPANY

by _____
Soren N. S. Laursen, Vice President

_____
Kenneth C. Wendel, Assistant Secretary

STATE OF NEW JERSEY }
County of Somerset } ss.

On this 24th day of May 1995, before me personally came Kenneth C. Wendel to me known and by me known to be Assistant Secretary of VIGILANT INSURANCE COMPANY, the corporation described in and which executed the foregoing Power of Attorney, and the said Kenneth C. Wendel being by me duly sworn, did depose and say that he is Assistant Secretary of VIGILANT INSURANCE COMPANY and knows the corporate seal thereof, that the seal affixed to the foregoing Power of Attorney is such corporate seal and was thereto affixed by authority of the By-Laws of said Company; and that he signed said Power of Attorney as Assistant Secretary of said Company by like authority; and that he is acquainted with Soren N. S. Laursen and knows him to be the Vice President of said Company; and that the signature of said Soren N. S. Laursen subscribed to said Power of Attorney is in the genuine handwriting of said Soren N. S. Laursen and was thereto subscribed by authority of said By-Laws and in deponent's presence.

Notarial Seal

Acknowledged and Sworn to before me on the date above written.

_____
Notary Public

LINDA SAWCHAK
Notary Public, State of New J
No. 2091352
Commission Expires July 29, 1996

CERTIFICATION

STATE OF NEW JERSEY }
County of Somerset } ss

I, the undersigned, Assistant Secretary of VIGILANT INSURANCE COMPANY, do hereby certify that the following is a true excerpt from the By-Laws of the said Company as adopted by its Board of Directors on June 13, 1974, and most recently amended June 2, 1989 and that this By-Law is in full force and effect.

"ARTICLE XV

Section 2. All bonds, undertakings, contracts, and other instruments other than as above, for and on behalf of the Company which it is authorized by law or its charter to execute, may and shall be executed in the name and on behalf of the Company either by the Chairman or the Vice Chairman or the President or a Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations, except that any one or more officers or attorneys-in-fact designated in any resolution of the Board of Directors or the Executive Committee, or in any power of attorney executed as provided for in Section 3 below, may execute any such bond, undertaking or other obligation as provided in such resolution or power of attorney.

Section 3. All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the Vice Chairman or the President or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. The signature of each of the following officers: Chairman, Vice Chairman, President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary and the seal of the Company may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such power of attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached."

I further certify that said VIGILANT INSURANCE COMPANY is duly licensed to transact fidelity and surety business in each of the States of the United States of America, District of Columbia and Puerto Rico, and is also duly licensed to become sole surety on bonds, undertakings, etc. permitted or required by the laws of the United States.

And I further certify that the foregoing Power of Attorney is in full force and effect.

Given under my hand and seal of the said Company at Warren, NJ this 16th day of November, 19 95.

Corporate Seal

_____
Assistant Secretary

15-10-0176 (Rev. 5-94) CONSENT [14]

ATTACHMENT 4:

Payment Requests

PAYMENT REQUEST NO. 1

FROM 7/12/95 TO 7/31/95

PROJECT TITLE: Whitefish Sand & Gravel Pits #1 through #4 Reclamation Project

LOCATION: Whitefish, MT MONT A/E or DEQ-AMRB: DEQ-AMRB

NAME OF CONTRACTOR: Shumaker Trucking & Excavating Contractors, Inc.

ADDRESS: P.O. Box 1442, Great Falls, MT 59403

SUMMARY OF PROJECT STATUS

Amount of Original Contract		$ 183,339.00
Change Order No. ____	$	
Change Order No. ____	$	
Change Order No. ____	$	
Amount of Approved Change Order(s)		$ 0.00
TOTAL CONTRACT AMOUNT		$ 183,339.00

Pay Request No.	Amount of Request
1	$90,300.00

Total Contract Amount Completed to Date	$90,300.00
Less Retainage (10%)	$ 9,030.00
TOTAL AMOUNT EARNED TO DATE	$81,270.00
Less Previous Payments	$ 0.00
AMOUNT DUE THIS PAYMENT	$81,270.00
Less 1% Tax	$ 812.70
TOTAL DUE CONTRACTOR	$80,457.30

I certify that this claim is correct and just in all respects and that payment or credit has not been received.

Shumaker Trucking & Excavating Contractors, Inc.
Contractor

By _____

Date _____

RECOMMENDED BY:

ESA Consultants Inc.
Engineer

By _____

Date 08/17/95

APPROVED BY:

Dept. of Environmental Quality, Abandoned Mine Reclamation Bureau
Owner

By _____

Date _____

Rev. 3/91

PIT #1

Item No.	Description	Contract Quantity	Contract Unit Price	Previous Quantity Requested	Current Quantity Completed	Total Quantity Completed To Date	Total Contract Amount Completed To Date	Amount Due this Payment
1	Mobilization	1.0	2,500.00	0%	80%	80%	2,000.00	2,000.00
2	Wood Debris Chipping	1.0	6,600.00	0%	100%	100%	6,600.00	6,600.00
3	Excavation/Embankment	13,500.0	0.90	0%	0%	0%	0.00	0.00
4	Gravel Blanket Drain	0.0	0.00	0%	0%	0%	0.00	0.00
5	Cover Soil Rehandling	400.0	3.00	0%	0%	0%	0.00	0.00
6	Riprap 12" Minus	1.0	2,400.00	0%	0%	0%	0.00	0.00
7	Seeding and Fertilizing	4.2	500.00	0%	0%	0%	0.00	0.00
8	Mulching	4.2	400.00	0%	0%	0%	0.00	0.00
9	Fencing Type F-4(M)	1,825.0	1.90	0%	0%	0%	0.00	0.00
10	Hinged Metal Gate	1.0	600.00	0%	0%	0%	0.00	0.00
11	Straw Bales - Erosion Control	140.0	10.00	0%	0%	0%	0.00	0.00
12	Structural Compaction	0.0	0.00	0%	0%	0%	0.00	0.00
13	MPDES Stormwater Permit	0.0	0.00	0%	0%	0%	0.00	0.00
	Materials on Site (Attach Schedule)	--	--	$	$	--------->		
	TOTALS						$8,600.00	$8,600.00

PIT #2

Item No.	Description	Contract Quantity	Contract Unit Price	Previous Quantity Requested	Current Quantity Completed	Total Quantity Completed To Date	Total Contract Amount Completed To Date	Amount Due this Payment
1	Mobilization	1.0	1,000.00	0%	80%	80%	800.00	800.00
2	Wood Debris Chipping	1.0	3,500.00	0%	100%	100%	3,500.00	3,500.00
3	Excavation/Embankment	2,000.0	0.90	0%	0%	0%	0.00	0.00
4	Gravel Blanket Drain	0.0	0.00	0%	0%	0%	0.00	0.00
5	Cover Soil Rehandling	300.0	3.00	0%	0%	0%	0.00	0.00
6	Riprap 12" Minus	0.0	0.00	0%	0%	0%	0.00	0.00
7	Seeding and Fertilizing	1.4	500.00	0%	0%	0%	0.00	0.00
8	Mulching	1.4	400.00	0%	0%	0%	0.00	0.00
9	Fencing Type F-4(M)	1,135.0	1.90	0%	0%	0%	0.00	0.00
10	Hinged Metal Gate	1.0	600.00	0%	0%	0%	0.00	0.00
11	Straw Bales - Erosion Control	0.0	0.00	0%	0%	0%	0.00	0.00
12	Structural Compaction	0.0	0.00	0%	0%	0%	0.00	0.00
13	MPDES Stormwater Permit	0.0	0.00	0%	0%	0%	0.00	0.00
	Materials on Site (Attach Schedule)	--	--	$	$	--------->		
	TOTALS						$4,300.00	$4,300.00

PIT #3

Item No.	Description	Contract Quantity	Contract Unit Price	Previous Quantity Requested	Current Quantity Completed	Total Quantity Completed To Date	Total Contract Amount Completed To Date	Amount Due this Payment
1	Mobilization	1.0	2,500.00	0%	80%	80%	2,000.00	2,000.00
2	Wood Debris Chipping	1.0	8,475.00	0%	100%	100%	8,475.00	8,475.00
3	Excavation/Embankment	29,500.0	0.90	0%	10%	10%	2,655.00	2,655.00
4	Gravel Blanket Drain	530.0	15.00	0%	0%	0%	0.00	0.00
5	Cover Soil Rehandling	800.0	3.00	0%	0%	0%	0.00	0.00
6	Riprap 12" Minus	1.0	2,472.00	0%	0%	0%	0.00	0.00
7	Seeding and Fertilizing	7.0	500.00	0%	0%	0%	0.00	0.00
8	Mulching	7.0	400.00	0%	0%	0%	0.00	0.00
9	Fencing Type F-4(M)	2,420.0	1.90	0%	0%	0%	0.00	0.00
10	Hinged Metal Gate	1.0	600.00	0%	0%	0%	0.00	0.00
11	Straw Bales - Erosion Control	65.0	10.00	0%	0%	0%	0.00	0.00
12	Structural Compaction	1.0	6,000.00	0%	0%	0%	0.00	0.00
13	MPDES Stormwater Permit	0.0	0.00	0%	0%	0%	0.00	0.00
	Materials on Site (Attach Schedule)	--	--	$	$	--------->		
	TOTALS						$13,130.00	$13,130.00

PIT #4

Item No.	Description	Contract Quantity	Contract Unit Price	Previous Quantity Requested	Current Quantity Completed	Total Quantity Completed To Date	Total Contract Amount Completed To Date	Amount Due this Payment
1	Mobilization	1.0	2,500.00	0%	80%	80%	2,000.00	2,000.00
2	Wood Debris Chipping	1.0	8,800.00	0%	100%	100%	8,800.00	8,800.00
3	Excavation/Embankment*	45,500.0	0.90	0%	100%	100%	40,950.00	40,950.00
4	Gravel Blanket Drain	0.0	0.00	0%	0%	0%	0.00	0.00
5	Cover Soil Rehandling	500.0	3.00	0	73%	73%	1,095.00	1,095.00
6	Riprap 12" Minus	0.0	0.00	0%	0%	0%	0.00	0.00
7	Seeding and Fertilizing	5.5	500.00	0%	0%	0%	0.00	0.00
8	Mulching	5.5	400.00	0%	0%	0%	0.00	0.00
9	Fencing Type F-4(M)	3,200.0	1.90	0%	0%	0%	0.00	0.00
10	Hinged Metal Gate	1.0	600.00	0%	0%	0%	0.00	0.00
11	Straw Bales - Erosion Control	250.0	10.00	0	31%	31%	775.00	775.00
12	Structural Compaction	1.0	10,000.00	0%	100%	100%	10,000.00	10,000.00
13	MPDES Stormwater Permit	1.0	650.00	0%	100%	100%	650.00	650.00
	Materials on Site (Attach Schedule)	--	--	$	$	--------->		
	TOTALS						$64,270.00	$64,270.00

PR - 2(4)

TOTAL PITS #1 THROUGH #4 $90,300.00 $90,300.00

* REVISED ESTIMATE AS PER WORK DIRECTIVE CHANGE NO.1

FINAL PAYMENT REQUEST

FROM 8/01/95 TO 9/30/95

PROJECT TITLE: Whitefish Sand & Gravel Pits #1 through #4 Reclamation Project

LOCATION: Whitefish, MT DEQ-AMRB: 94004

NAME OF CONTRACTOR: Shumaker Trucking & Excavating Contractors, Inc.

ADDRESS: P.O. Box 1442, Great Falls, MT 59403

SUMMARY OF PROJECT STATUS

Amount of Original Contract		$ 183,339.00
Change Order No. 1	$ 3,134.00	
Change Order No. 2	$ (6,433.60)	
Change Order No. ____	$	
Amount of Approved Change Order(s)		$ (3,299.60)
TOTAL CONTRACT AMOUNT		$ 180,039.40

Pay Request No.	Amount of Request
1	$90,300.00
Final	$89,739.40

Total Contract Amount Completed to Date	$180,039.40
Less Retainage (10%)	$ 0.00
TOTAL AMOUNT EARNED TO DATE	$180,039.40
Less Previous Payments	$ 90,300.00
AMOUNT DUE THIS PAYMENT	$ 89,739.40
Less 1% Tax	$ 897.40
TOTAL DUE CONTRACTOR	$ 88,842.00

I certify that this claim is correct and just in all respects and that payment or credit has not been received.

Shumaker Trucking & Excavating Contractors, Inc.
Contractor

By [signature]

Date 11/9/95

RECOMMENDED BY:

ESA Consultants Inc.
Engineer

By George E. Austerman

Date 11/8/95

APPROVED BY:

Dept. of Environmental Quality, Abandoned Mine Reclamation Bureau
Owner

By Jack D. Tates

Date 11/27/95

RESP. CNTR. [illegible] F
OBJ. EXP. 2121
APPROVAL [signature]
DATE 11-27-95

Rev. 3/91

PIT #1

Item No.	Description	Contract Quantity	Final Quantity	Contract Unit Price	Previous Quantity Requested	Current Quantity Completed	Total Quantity Completed To Date	Total Contract Amount Completed To Date	Total Amount per Final Quantity	Amount Due Final Payment
1	Mobilization	1.0	1.0	2,500.00	80%	20%	100%	2,000.00	2,500.00	500.00
2	Wood Debris Chipping	1.0	1.0	6,600.00	100%	0%	100%	6,600.00	6,600.00	0.00
3	Excavation/Embankment	13,500.0	14,175.0	0.90	0%	100%	100%	0.00	12,757.50	12,757.50
4	Gravel Blanket Drain	0.0	0.0	0.00	0%	0%	0%	0.00	0.00	0.00
5	Cover Soil Rehandling	400.0	0.0	3.00	0%	0%	0%	0.00	0.00	0.00
6	Riprap 12" Minus	1.0	1.0	2,400.00	0%	100%	100%	0.00	2,400.00	2,400.00
7	Seeding and Fertilizing	4.2	4.1	500.00	0%	100%	100%	0.00	2,050.00	2,050.00
8	Mulching	4.2	4.1	400.00	0%	100%	100%	0.00	1,640.00	1,640.00
9	Fencing Type F-4(M)	1,825.0	1,730.0	1.90	0%	100%	100%	0.00	3,287.00	3,287.00
10	Hinged Metal Gate	1.0	1.0	600.00	0%	100%	100%	0.00	600.00	600.00
11	Straw Bales - Erosion Control	140.0	0.0	10.00	0%	0%	0%	0.00	0.00	0.00
12	Structural Compaction	0.0	0.0	0.00	0%	0%	0%	0.00	0.00	0.00
13	MPDES Stormwater Permit	0.0	0.0	0.00	0%	0%	0%	0.00	0.00	0.00
	Materials on Site (Attach Schedule)	--	--	--	$	$	---------->			
	TOTALS							$8,600.00	$31,834.50	$23,234.50

PIT #2

Item No.	Description	Contract Quantity	Final Quantity	Contract Unit Price	Previous Quantity Requested	Current Quantity Completed	Total Quantity Completed To Date	Total Contract Amount Completed To Date	Total Amount per Final Quantity	Amount Due Final Payment
1	Mobilization	1.0	1.0	1,000.00	80%	20%	100%	800.00	1,000.00	200.00
2	Wood Debris Chipping	1.0	1.0	3,500.00	100%	0%	100%	3,500.00	3,500.00	0.00
3	Excavation/Embankment	2,000.0	2,009.0	0.90	0%	100%	100%	0.00	1,808.10	1,808.10
4	Gravel Blanket Drain	0.0	0.0	0.00	0%	0%	0%	0.00	0.00	0.00
5	Cover Soil Rehandling	300.0	60.0	3.00	0%	100%	100%	0.00	180.00	180.00
6	Riprap 12" Minus	0.0	0.0	0.00	0%	0%	0%	0.00	0.00	0.00
7	Seeding and Fertilizing	1.4	1.1	500.00	0%	100%	100%	0.00	550.00	550.00
8	Mulching	1.4	1.1	400.00	0%	100%	100%	0.00	440.00	440.00
9	Fencing Type F-4(M)	1,135.0	1,063.0	1.90	0%	100%	100%	0.00	2,019.70	2,019.70
10	Hinged Metal Gate	1.0	1.0	600.00	0%	100%	100%	0.00	600.00	600.00
11	Straw Bales - Erosion Control	0.0	0.0	0.00	0%	0%	0%	0.00	0.00	0.00
12	Structural Compaction	0.0	0.0	0.00	0%	0%	0%	0.00	0.00	0.00
13	MPDES Stormwater Permit	0.0	0.0	0.00	0%	0%	0%	0.00	0.00	0.00
	Materials on Site (Attach Schedule)	--	--	--	$	$	---------->			
	TOTALS							$4,300.00	$10,097.80	$5,797.80

PR - Final(2)

PIT #3

Item No.	Description	Contract Quantity	Final Quantity	Contract Unit Price	Previous Quantity Requested	Current Quantity Completed	Total Quantity Completed To Date	Total Contract Amount Completed To Date	Total Amount per Final Quantity	Amount Due Final Payment
1	Mobilization	1.0	1.0	2,500.00	80%	20%	100%	2,000.00	2,500.00	500.00
2	Wood Debris Chipping	1.0	1.0	8,475.00	100%	0%	100%	8,475.00	8,475.00	0.00
3	Excavation/Embankment	29,500.0	27,271.0	0.90	10%	90%	100%	2,655.00	24,543.90	21,888.90
4	Gravel Blanket Drain	530.0	808.0	15.00	0%	100%	100%	0.00	12,120.00	12,120.00
5	Cover Soil Rehandling	800.0	301.0	3.00	0%	100%	100%	0.00	903.00	903.00
6	Riprap 12" Minus	1.0	1.0	2,472.00	0%	100%	100%	0.00	2,472.00	2,472.00
7	Seeding and Fertilizing	7.0	6.6	500.00	0%	100%	100%	0.00	3,300.00	3,300.00
8	Mulching	7.0	6.6	400.00	0%	100%	100%	0.00	2,640.00	2,640.00
9	Fencing Type F-4(M)	2,420.0	2,341.0	1.90	0%	100%	100%	0.00	4,447.90	4,447.90
10	Hinged Metal Gate	1.0	1.0	600.00	0%	100%	100%	0.00	600.00	600.00
11	Straw Bales - Erosion Control	65.0	37.0	10.00	0%	100%	100%	0.00	370.00	370.00
12	Structural Compaction	1.0	1.0	6,000.00	0%	100%	100%	0.00	6,000.00	6,000.00
13	MPDES Stormwater Permit	0.0	0.0	0.00	0%	0%	0%	0.00	0.00	0.00
	Materials on Site (Attach Schedule)	--	--	--	$	$	---------->			
	TOTALS							$13,130.00	$68,371.80	$55,241.80

PR - Final(3)

PIT #4

Item No.	Description	Contract Quantity	Final Quantity	Contract Unit Price	Previous Quantity Requested	Current Quantity Completed	Total Quantity Completed To Date	Total Contract Amount Completed To Date	Total Amount per Final Quantity	Amount Due Final Payment
1	Mobilization	1.0	1.0	2,500.00	80%	20%	100%	2,000.00	2,500.00	500.00
2	Wood Debris Chipping	1.0	1.0	8,800.00	100%	0%	100%	8,800.00	8,800.00	0.00
3	Excavation/Embankment	35,500.0	38,067.0	0.90	100%	0%	100%	40,950.00	34,260.30	(6,689.70)
4	Gravel Blanket Drain	0.0	0.0	0.00	0%	0%	0%	0.00	0.00	0.00
5	Cover Soil Rehandling	500.0	364.0	3.00	73%	27%	100%	1,095.00	1,092.00	(3.00)
6	Riprap 12" Minus	0.0	0.0	0.00	0%	0%	0%	0.00	0.00	0.00
7	Seeding and Fertilizing	5.5	4.9	500.00	0%	100%	100%	0.00	2,450.00	2,450.00
8	Mulching	5.5	4.9	400.00	0%	100%	100%	0.00	1,960.00	1,960.00
9	Fencing Type F-4(M)	3,200.0	1,410.0	1.90	0%	100%	100%	0.00	2,679.00	2,679.00
10	Hinged Metal Gate	1.0	1.0	600.00	0%	100%	100%	0.00	600.00	600.00
11	Straw Bales - Erosion Control	250.0	161.0	10.00	31%	69%	100%	775.00	1,610.00	835.00
12	Structural Compaction	1.0	1.0	10,000.00	100%	0%	100%	10,000.00	10,000.00	0.00
13	MPDES Stormwater Permit	1.0	1.0	650.00	100%	0%	100%	650.00	650.00	0.00
	Materials on Site (Attach Schedule)	--	--	--	$	$	---------->			
	TOTALS							$64,270.00	$66,601.30	$2,331.30

PR - Final(4)

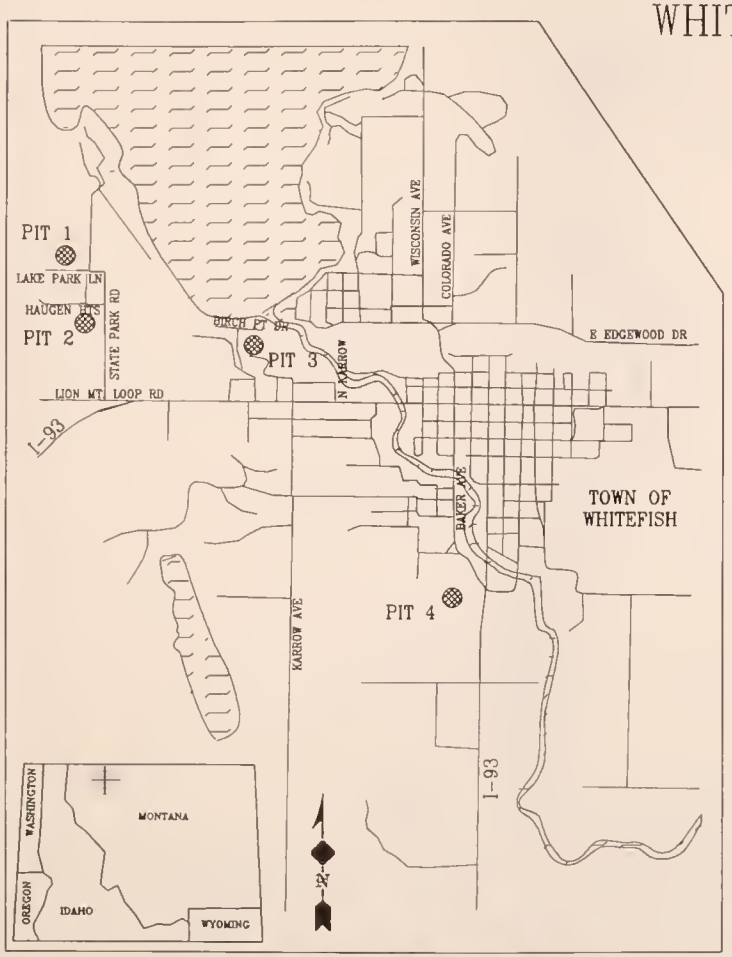
TOTAL PITS #1 THROUGH #4	$90,300.00	$176,905.40	$86,605.40
CHANGE ORDER NO. 1		$3,134.00	$3,134.00
TOTAL DUE THIS FINAL PAYMENT	$90,300.00	$180,039.40	$89,739.40

ATTACHMENT 5:

As-Built Drawings

MONTANA DEPARTMENT OF STATE LANDS
ABANDONED MINE RECLAMATION BUREAU

WHITEFISH SAND AND GRAVEL PITS
PROJECT NO: DSL 94-004
APRIL, 1995



VICINITY MAP

NOT TO SCALE

MONTANA
ABANDONED MINE
RECLAMATION BUREAU

ABBREVIATIONS

APPROX.	APPROXIMATE
ELEV.	ELEVATION
STA	STATION
TBM	TEMPORARY BENCH MARK
TYP.	TYPICAL
NO.	NUMBER
N	NORTHING
E	EASTING
ADD.	ADDITION
BNRR	BURLINGTON NORTHERN RAILROAD
R.O.W.	RIGHT OF WAY
RESUB.	RESUBDIVISION
SUB.	SUBDIVISION
AC.	ACRE
C.Y.	CUBIC YARD
℄	CENTERLINE
", IN	INCHES
', FT	FEET

NOTE: ~~SHADED TITLES~~ WERE PART OF ORIGINAL CONSTRUCTION DRAWINGS BUT ARE NOT INCLUDED HEREIN.

TABLE OF CONTENTS

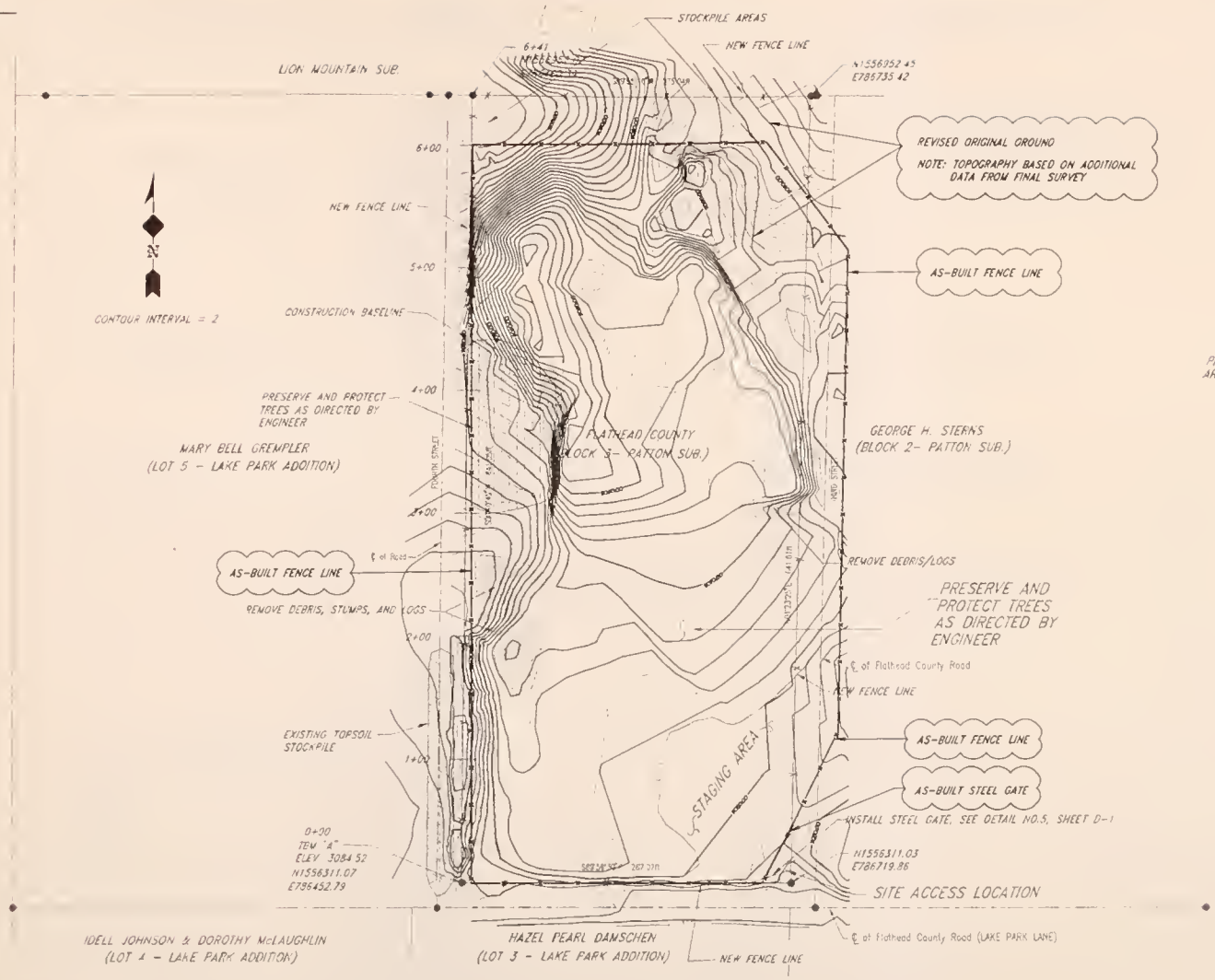
SHEET	DESCRIPTION
C-1	COVER SHEET
	PIT 1
1-1	EXISTING PLAN VIEW AND LOCATION MAP
1-2	GRADING PLAN
~~1-3~~	~~STORMWATER AND EROSION CONTROL PLAN~~
~~1-4 TO 1-12~~	~~CROSS SECTIONS~~
	PIT 2
2-1	EXISTING PLAN VIEW AND LOCATION MAP
2-2	GRADING PLAN
~~2-3 TO 2-6~~	~~CROSS SECTIONS~~
	PIT 3
3-1	EXISTING PLAN VIEW AND LOCATION MAP
3-2	GRADING PLAN
~~3-3~~	~~STORMWATER AND EROSION CONTROL PLAN~~
~~3-4 TO 3-15~~	~~CROSS SECTIONS~~
	PIT 4
4-1	EXISTING PLAN VIEW AND LOCATION MAP
4-2	GRADING PLAN
~~4-3~~	~~STORMWATER AND EROSION CONTROL PLAN~~
~~4-4 TO 4-15~~	~~CROSS SECTIONS~~
~~D-1~~	~~DETAIL SHEET~~

RECORD DRAWINGS
THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON INFORMATION FURNISHED BY OTHERS. ESA CONSULTANTS INC. DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF SAID INFORMATION.

Prepared By:
ESA CONSULTANTS INC.
215 West Mendenhall, Suite C-1, Bozeman, MT 59715

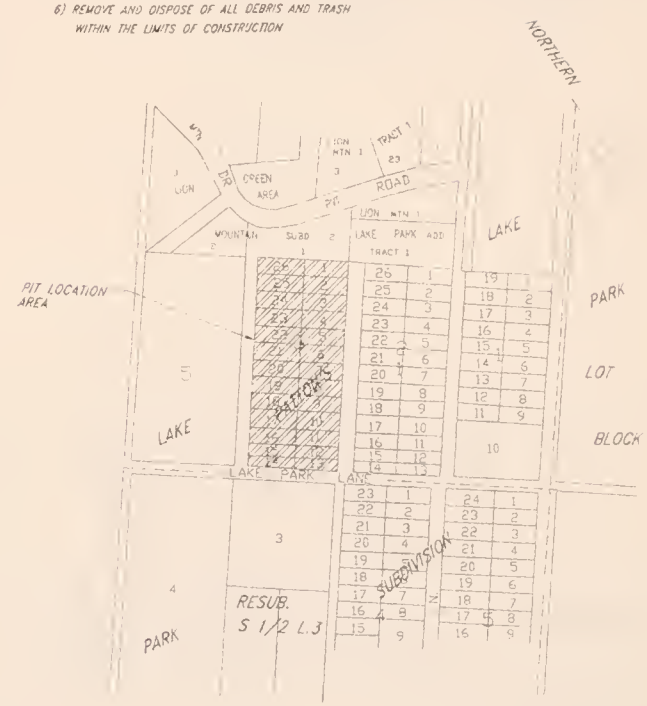
SHEET C-1

EXISTING GROUND PLAN



NOTES:

1) INSTALL 1825 LINEAR FEET OF NEW FENCE.
2) DO NOT DISTURB PROPERTY PINS.
3) CONTRACTOR TO FIELD LOCATE ALL EXISTING UTILITIES.
4) DO NOT DISTURB EXISTING UTILITIES, EXCEPT AS REQUIRED BY CONSTRUCTION AND APPROVED BY ENGINEER.
5) AREAS FOR TOPSOIL SALVAGE WILL BE DESIGNATED IN THE FIELD BY THE ENGINEER
6) REMOVE AND DISPOSE OF ALL DEBRIS AND TRASH WITHIN THE LIMITS OF CONSTRUCTION



PROPERTY LOCATION MAP

DRAWING NOT TO SCALE

LEGEND

- ● FIELD LOCATED PROPERTY CORNER
- INTERSECTION OF PROPERTY LINES WITH NO MARKERS. PROPERTY BOUNDARY SHOWN IS BASED SOLELY ON RECORDS.
- —x— PLANNED NEW FENCE LINE
- APPROXIMATE AREA OF REMOVAL OF STUMPS/LOGS/DEBRIS REQUIRED

BILLMAYER ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

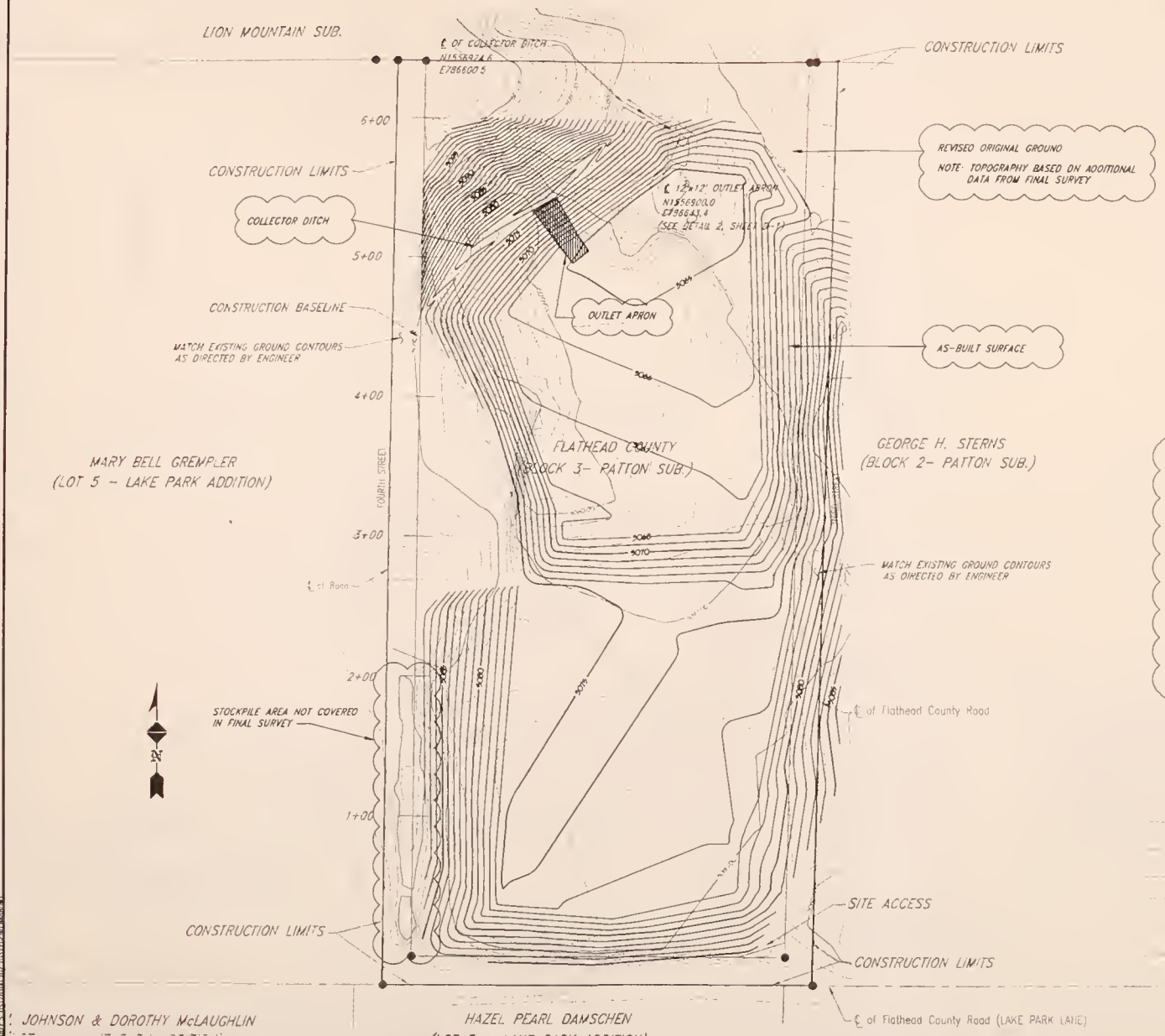
RMB/SAH DRAWN	SJP/GEA DESIGNED	GEA CHECKED	SCALE HORIZ. 1"=50' VERT: N/A
GEA APPROVED	11/1/95 DATE	125.9502 PROJECT NO	SCALE IN FEET 0 50 100

MONTANA DEPT OF STATE LANDS
WHITEFISH, MONTANA
WHITEFISH SAND AND GRAVEL PITS

Prepared By
ESA CONSULTANTS INC.
215 West Mendenhall, Suite C-1, Bozeman, MT 59715

EXISTING PLAN VIEW AND LOCATION MAP OF PIT #1

SHEET 1-1



CONSTRUCTION LIMITS

REVISED ORIGINAL GROUND

NOTE: TOPOGRAPHY BASED ON ADDITIONAL DATA FROM FINAL SURVEY

AS-BUILT SURFACE

NOTES:

1) CONTRACTOR SHALL NOT OPERATE ON OR DISTURB GROUND OUTSIDE THE CONSTRUCTION LIMITS SHOWN ON THIS SHEET. ACCESS TO PIT SHALL ONLY BE AT LOCATION SHOWN.

2) CONTRACTOR SHALL PRESERVE AND PROTECT TREES WITHIN THE LIMITS OF CONSTRUCTION AS DIRECTED BY THE ENGINEER

ENGINEERS EARTHMOVING ESTIMATE

CUT/FILL*	FINAL GRADING SURFACE AREA
~~13500 C.Y.~~	~~4.2 AC.~~
N.A.	4.1 AC.

* INCLUDES EXISTING TOPSOIL STOCKPILE QUANTITY OF APPROXIMATELY 500 C.Y.

NOTE:
ORIGINAL TOPOGRAPHIC SURVEY DATA CONTAINS ERRORS, FINAL EXCAVATION QUANTITY IS BASED UPON ORIGINAL ESTIMATE. FINAL GRADING SURFACE SHOWN HERE IS BASED UPON FINAL SURVEY DATA.

LEGEND

3040	PROPOSED GROUND INDEX CONTOUR
3038	PROPOSED GROUND INTERMEDIATE CONTOUR
3040	EXISTING GROUND INDEX CONTOUR
3038	EXISTING GROUND INTERMEDIATE CONTOUR
●	FIELD LOCATED PROPERTY CORNER
	INTERSECTION OF PROPERTY LINES WITH NO MARKERS. PROPERTY BOUNDARY SHOWN IS BASED SOLELY ON RECORDS.

NO	BY	DATE	REVISION DESCRIPTION

DWO/RMR/SAH DRAWN | WSB/GEA DESIGNED | GEA CHECKED
GEA APPROVED | 11/1/95 DATE | 125.9502 PROJECT NO

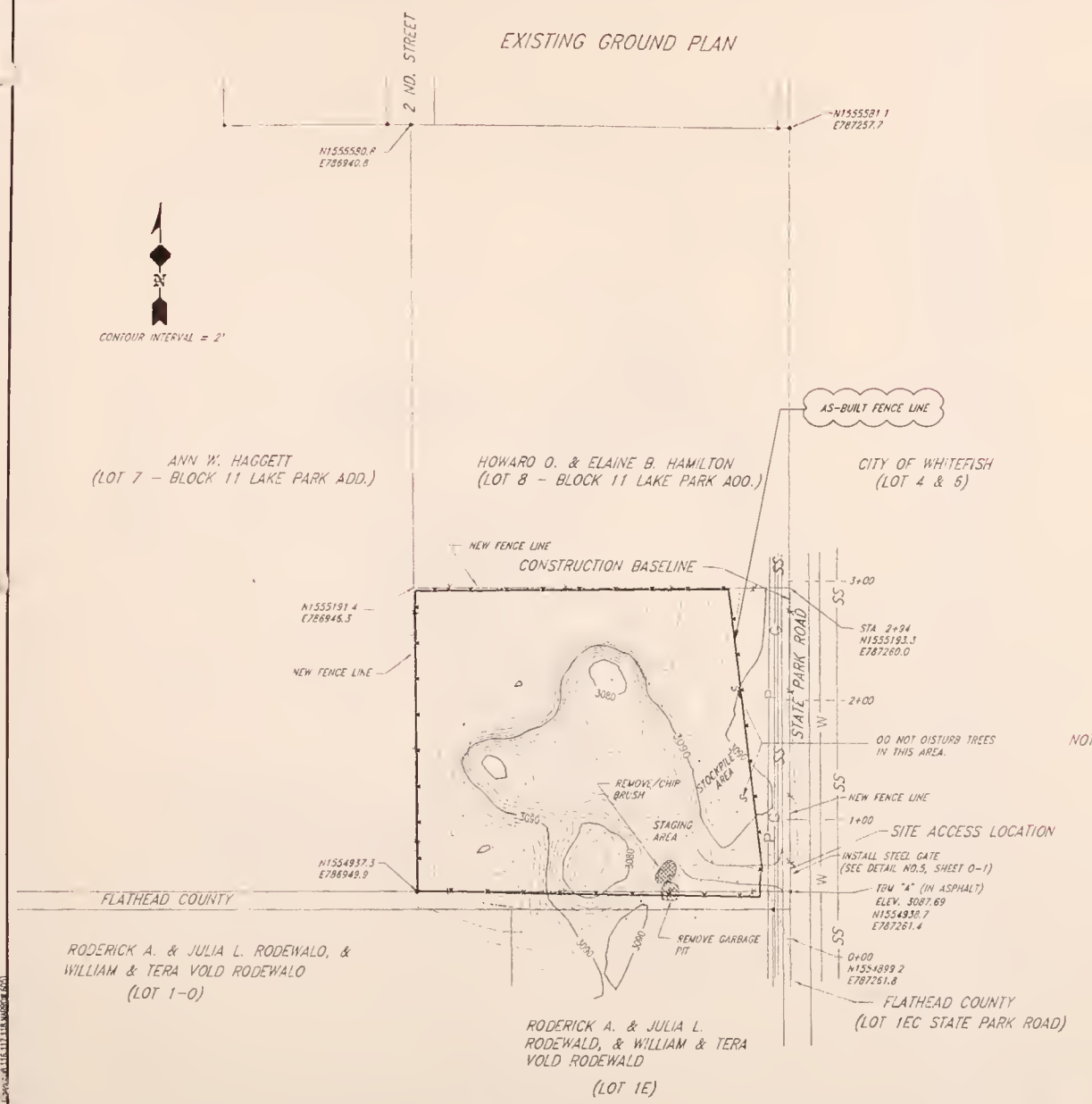
SCALE HORIZ. 1"=40' VERT. N/A
SCALE IN FEET 0 40 80

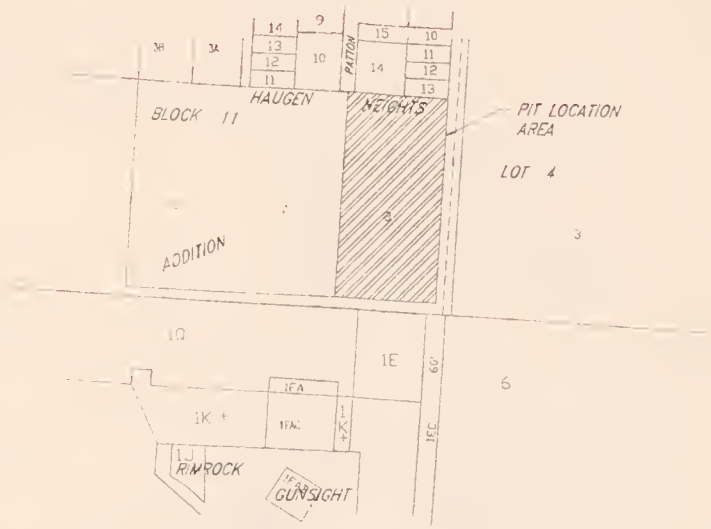
MONTANA DEPT OF STATE LANDS
WHITEFISH, MONTANA
WHITEFISH SAND & GRAVEL PITS

Prepared By:
ESA CONSULTANTS INC.
215 West Mendenhall, Suite C-1, Bozeman, MT 59715

GRADING PLAN
GRAVEL PIT NO. 1

SHEET 1-2





PROPERTY LOCATION MAP

DRAWING NOT TO SCALE

NOTES:

1) INSTALL 1135 LINEAR FEET OF NEW FENCE
2) DO NOT DISTURB PROPERTY PINS.
3) CONTRACTOR TO FIELD LOCATE ALL EXISTING UTILITIES.
4) DO NOT DISTURB EXISTING UTILITIES, EXCEPT AS REQUIRED BY CONSTRUCTION AND APPROVED BY ENGINEER
5) AREAS FOR TOPSOIL SALVAGE WILL BE DESIGNATED IN THE FIELD BY THE ENGINEER.
6) REMOVE AND DISPOSE OF ALL DEBRIS AND TRASH WITHIN THE LIMITS OF CONSTRUCTION

LEGEND

- FIELD LOCATED PROPERTY CORNER.
- INTERSECTION OF PROPERTY LINES WITH NO MARKERS. PROPERTY BOUNDARY SHOWN IS BASED SOLELY ON RECORDS.
- APPROXIMATE AREA OF EXISTING GARBAGE PIT TO BE REMOVED.
- X — PLANNED NEW FENCE LINE.
- W — EXISTING WATER LINE.
- SS — PROPOSED SANITARY SEWER FORCE MAIN LINE
- G — EXISTING GAS LINE.
- P — EXISTING OVERHEAD POWER

BILLMAYER ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

SJP/RMB/SAH DRAWN	SJP/GEA DESIGNED	GEA CHECKED
GEA APPROVED	11/1/95 DATE	126.9502 PROJECT NO

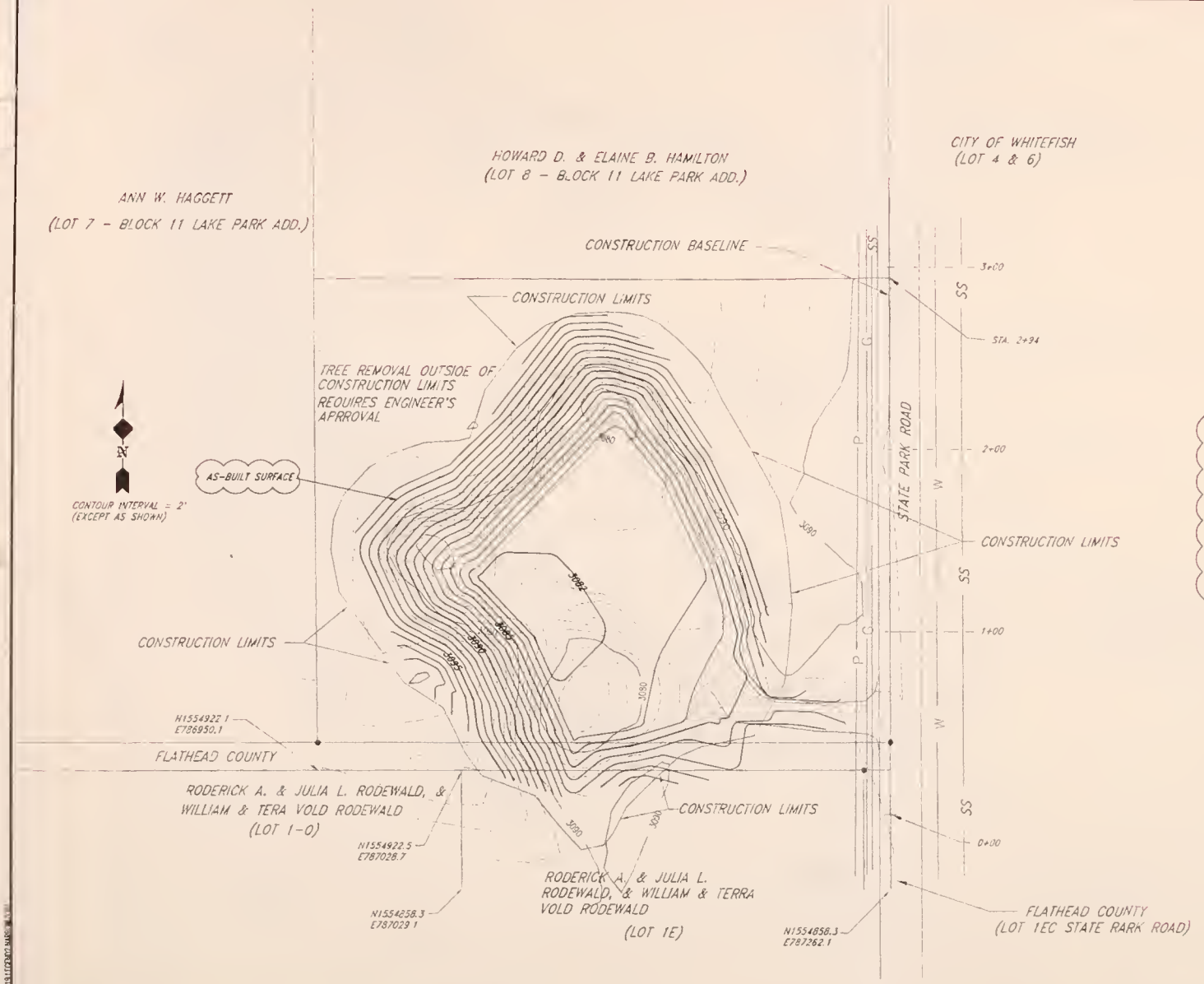
SCALE HORIZ: 1"=50' VERT: N/A
SCALE IN FEET 0 50 100

MONTANA DEPT OF STATE LANDS
WHITEFISH, MONTANA
WHITEFISH SAND AND GRAVEL PITS

Prepared By:
ESA CONSULTANTS INC.
215 West Mendenhall, Suite C-1, Bozeman, MT 59715

EXISTING PLAN VIEW AND LOCATION MAP
OF PIT # 2

SHEET 2-1



NOTES:

1) CONTRACTOR SHALL NOT OPERATE ON OR DISTURB GROUND OUTSIDE THE CONSTRUCTION LIMITS AS SHOWN ON THIS SHEET. ACCESS TO THE PIT SHALL ONLY BE AT LOCATION SHOWN
2) CONTRACTOR TO FIELD VERIFY LOCATIONS OF ALL UTILITIES.
3) CONTRACTOR SHALL PRESERVE AND PROTECT TREES WITHIN LIMITS OF CONSTRUCTION AS DIRECTED BY ENGINEER
4) TREE REMOVAL OUTSIDE OF CONSTRUCTION LIMITS REQUIRES ENGINEER'S APPROVAL.

ENGINEERS EARTHMOVING ESTIMATE

CUT/FILL	FINAL GRADING SURFACE AREA
~~2000 C.Y.~~	~~1.4 AC.~~
2009 C.Y.	1.1 AC.

NOTE: REVISED QUANTITIES BASED UPON FINAL SURVEY

LEGEND

3040	PROPOSED GROUND INDEX CONTOUR
3038	PROPOSED GROUND INTERMEDIATE CONTOUR
3040	EXISTING GROUND INDEX CONTOUR
	EXISTING GROUND INTERMEDIATE CONTOUR
P	EXISTING OVERHEAD POWER LINES
G	EXISTING NATURAL GAS LINE
SS	PROPOSED SANITARY SEWER LINE
W	EXISTING 8" WATER LINE
●	FIELD LOCATED PROPERTY CORNER
	INTERSECTION OF PROPERTY LINES WITH NO MARKERS. PROPERTY BOUNDARY SHOWN IS BASED SOLELY ON RECORDS.

NO	BY	DATE	REVISION DESCRIPTION

RMB/SAH DRAWN | RJB/SJP DESIGNED | GEA CHECKED
GEA APPROVED | 11/1/95 DATE | 128.9502 PROJECT NO

SCALE HORIZ. 1"=30' VERT. N/A
SCALE IN FEET 0 30 60

MONTANA DEPT OF STATE LANDS
WHITEFISH, MONTANA
WHITEFISH SAND AND GRAVEL PITS

Prepared By:
ESA CONSULTANTS INC.
215 West Mendenhall, Suite C-1, Bozeman, MT 59715

GRADING PLAN
PIT NO. 2

SHEET 2-2

EXISTING GROUND PLAN

SITE ACCESS LOCATION
AS-BUILT STEEL GATE
INSTALL STEEL GATE (SEE DETAIL NO.5, SHEET D+1)
INSTALL NEW FENCE
BNRR ℄ TRACKS
BURLINGTON NORTHERN RAILWAY CO. R.O.W. 100' FROM ℄ OF TRACK
INSTALL NEW FENCE
BURLINGTON NORTHERN RAILWAY CO. (LOT 4A)
AS-BUILT FENCE LINE
STAGING AREA
STOCKPILE AREA
FENCE - OFFSET 5' FROM EDGE OF ROAD
BIRCH POINT DRIVE
T ST. STREET
WALTER T. & ANNA K. SAVRE (LOT 9)
LOT 9
LOT 8
CITY OF WHITEFISH (LOT 8)
BURLINGTON NORTHERN RAILWAY CO. (LOT 4B)
BURLINGTON NORTHERN RAILWAY CO. (LOT 4DAB & 4B)
RESERVE AND PROTECT TREES AS DIRECTED BY ENGINEER
REMOVE DEAD TREES AND TRASH
INSTALL NEW FENCE
REVISED ORIGINAL GROUND
NOTE: TOPOGRAPHY BASED ON ADDITIONAL DATA FROM FINAL SURVEY
AS-BUILT STRAW BALES
CITY OF WHITEFISH (LOT 4C)
EXISTING STOCKPILE
JUDITH A. SCHOOLEY (LOT 4DAC & 4DAD)
FLATHEAD COUNTY (LOT 4CA & 4CC)
RAMSEY AVE.
CITY OF WHITEFISH (LOT 4C)
CONSTRUCTION BASE LINE
INSTALL NEW FENCE
FLATHEAD COUNTY (LOT 4CC)
11

N1554741.4 E789931.7
N1554674.0 E790538.7
N1554706.9 E790082.0
N1554706.9 E790321.0
N1554613.99 E790539.23
N1554324 E790370.7
N1554318.81 E790541.65
N1554318.9 E790370.7
N1554264.8 E789906.7
N1554067.6 E790538.8
N1553998.1 E790283.4
N1553998.1 E790359.5 (FIELD VERIFY)
N1553893.8 E790536.1

NOTES:

1) INSTALL 2420 LINEAR FEET OF NEW FENCE.
2) DO NOT DISTURB PROPERTY PINS.
3) CONTRACTOR TO FIELD LOCATE ALL EXISTING UTILITIES.
4) DO NOT DISTURB EXISTING UTILITIES, EXCEPT AS REQUIRED BY CONSTRUCTION AND APPROVED BY ENGINEER
5) AREAS FOR TOPSOIL SALVAGE WILL BE DESIGNATED IN THE FIELD BY THE ENGINEER.
6) REMOVE AND DISPOSE OF ALL DEBRIS AND TRASH WITHIN THE LIMITS OF CONSTRUCTION

PROPERTY LOCATION MAP

DRAWING NOT TO SCALE

LEGEND

- ● FIELD LOCATED PROPERTY CORNER
- INTERSECTION OF PROPERTY LINES WITH NO MARKERS. PROPERTY BOUNDARY SHOWN IS BASED SOLELY ON RECORDS.
- —x— PLANNED NEW FENCE LINE

BILLMAYER ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION
1	SJP	7/8/95	REVISED DUE TO AN AMOUNT OF ADDED TOPSOIL WHICH CHANGED PREVIOUS EXISTING CONTOURS IN THE NORTHERN AREA NEAR THE STOCKPILE AREA.

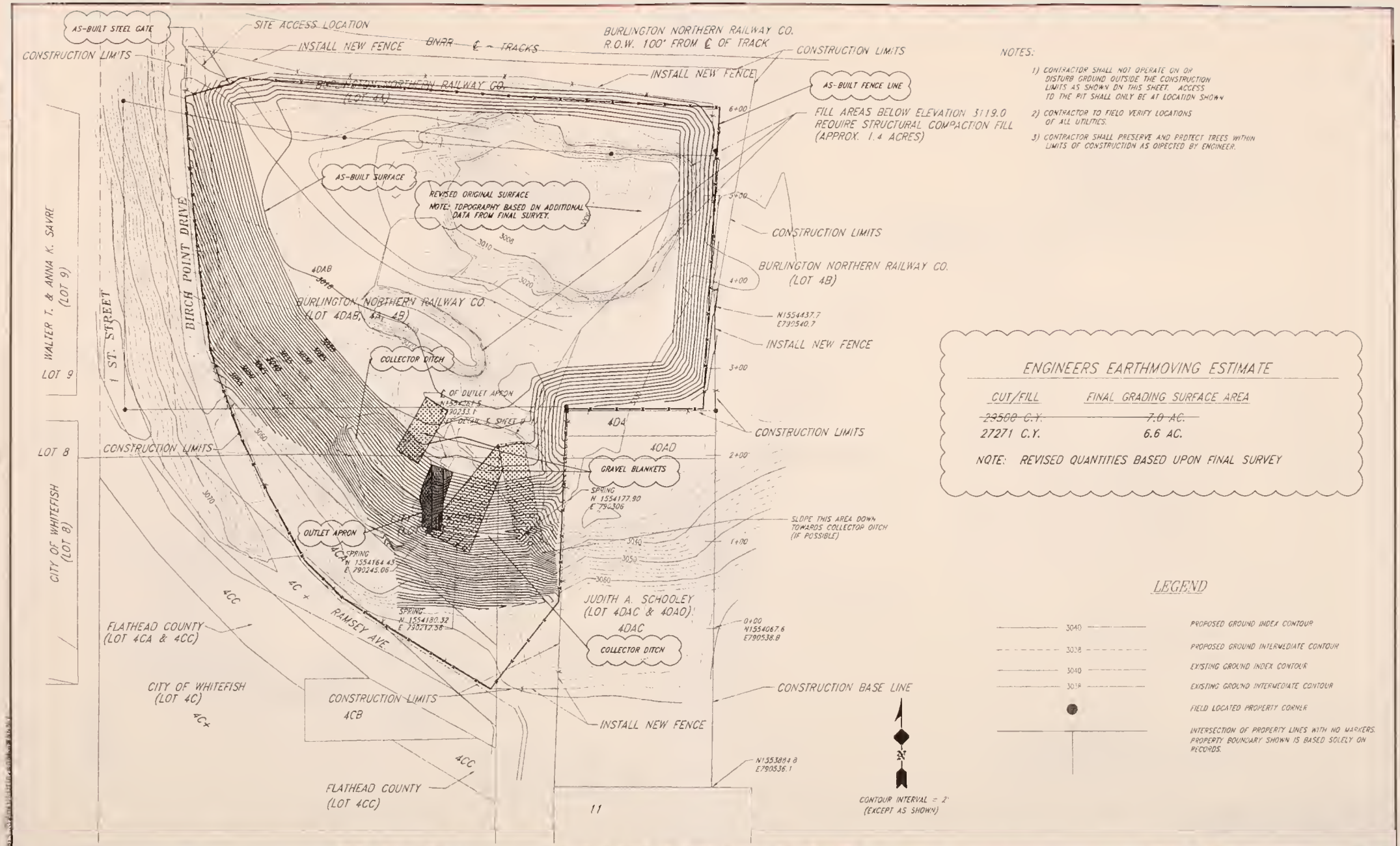
SJP/RWB/KAS DRAWN — SJP/GEA DESIGNED — GEA CHECKED
GEA APPROVED — 11/1/95 DATE — 125.9502 PROJECT NO.
SCALE HORIZ. 1"=50' VERT: N/A
SCALE IN FEET 0 50 100

MONTANA DEPT OF STATE LANDS
WHITEFISH, MONTANA
WHITEFISH SAND AND GRAVEL PITS

Prepared By:
ESA CONSULTANTS INC.
215 West Mendenhall, Suite C-1, Bozeman, MT 59715

EXISTING PLAN VIEW AND LOCATION MAP OF PIT #3

SHEET 3-1



NOTES:

1) CONTRACTOR SHALL NOT OPERATE ON OR DISTURB GROUND OUTSIDE THE CONSTRUCTION LIMITS AS SHOWN ON THIS SHEET. ACCESS TO THE PIT SHALL ONLY BE AT LOCATION SHOWN

2) CONTRACTOR TO FIELD VERIFY LOCATIONS OF ALL UTILITIES.

3) CONTRACTOR SHALL PRESERVE AND PROTECT TREES WITHIN LIMITS OF CONSTRUCTION AS DIRECTED BY ENGINEER.

ENGINEERS EARTHMOVING ESTIMATE

CUT/FILL	FINAL GRADING SURFACE AREA
~~22500 C.Y.~~	~~7.0 AC.~~
27271 C.Y.	6.6 AC.

NOTE: REVISED QUANTITIES BASED UPON FINAL SURVEY

LEGEND

3040	PROPOSED GROUND INDEX CONTOUR
3038	PROPOSED GROUND INTERMEDIATE CONTOUR
3040	EXISTING GROUND INDEX CONTOUR
3038	EXISTING GROUND INTERMEDIATE CONTOUR
●	FIELD LOCATED PROPERTY CORNER
	INTERSECTION OF PROPERTY LINES WITH NO MARKERS. PROPERTY BOUNDARY SHOWN IS BASED SOLELY ON RECORDS.

NO.	BY	DATE	REVISION DESCRIPTION
1	S.P.	7/6/95	REVISED DUE TO AN AMOUNT OF ADDED TOPSOIL WHICH CHANGED PREVIOUS EXISTING CONTOURS

DRAWN: MJO/RMB/KAS | DESIGNED: MRB/GEA | CHECKED: GEA
APPROVED: GEA | DATE: 11/1/95 | PROJECT NO: 126.9502

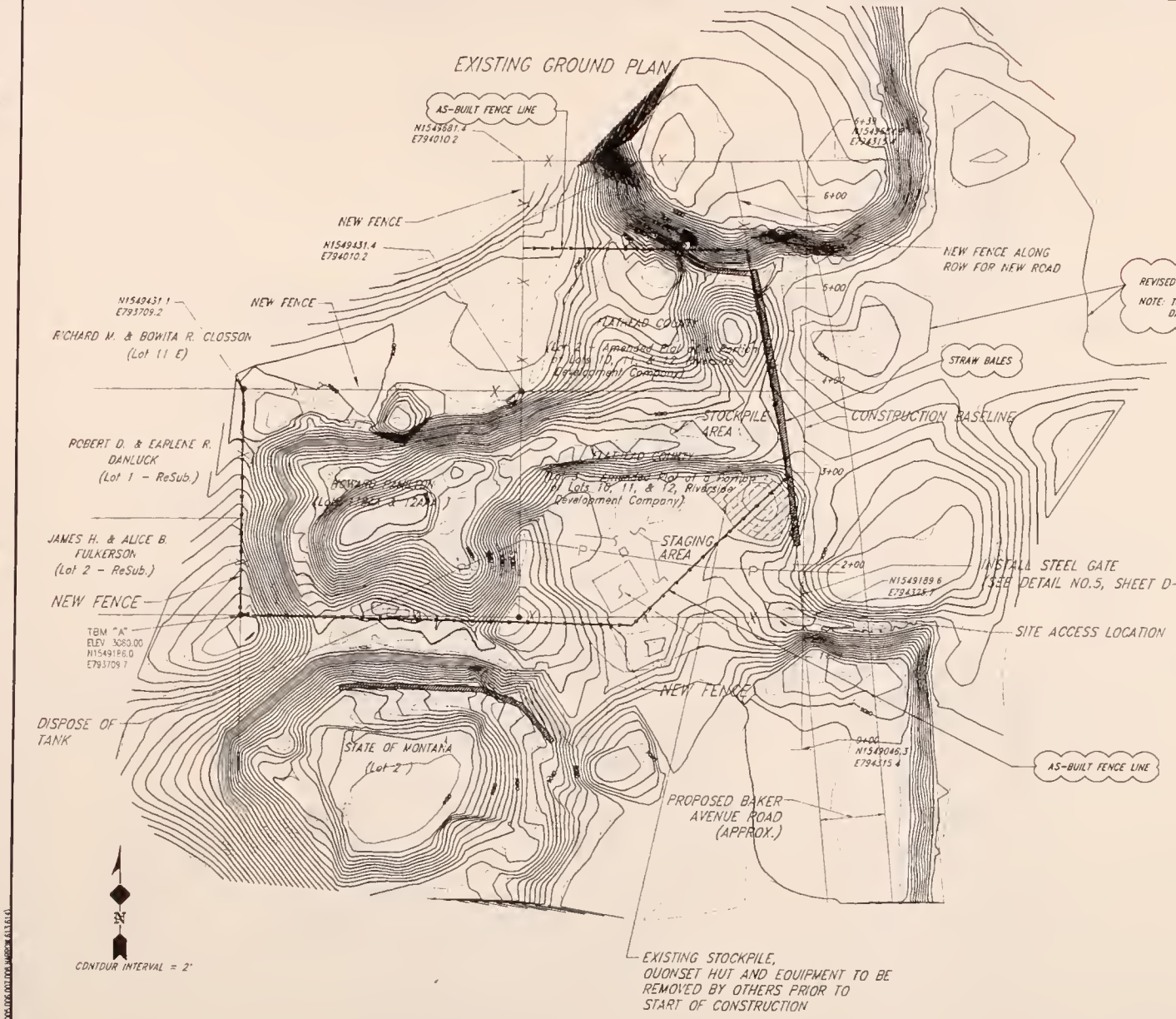
SCALE HORIZ. 1"=50' VERT: N/A
SCALE IN FEET 0 50 100

MONTANA DEPT OF STATE LANDS
WHITEFISH, MONTANA
WHITEFISH SAND & GRAVEL PITS

Prepared By:
ESA CONSULTANTS INC.
215 West Mendenhall, Suite C-1, Bozeman, MT 59715

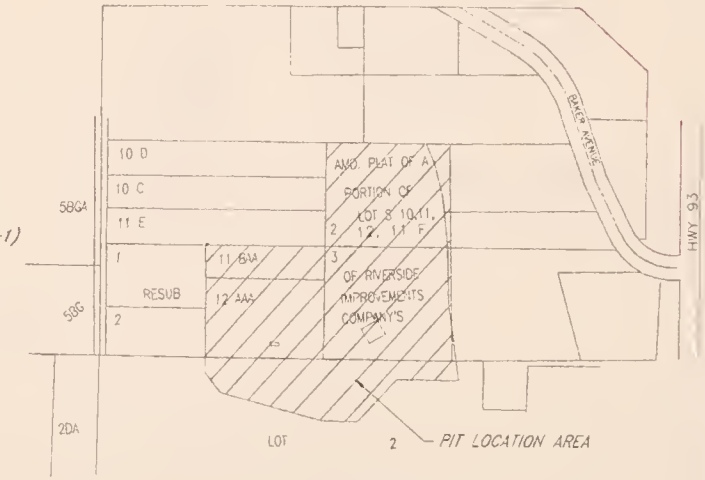
GRADING PLAN
GRAVEL PIT NO. 3

SHEET 3-2



NOTES:

1) INSTALL APPROX. 3200 LINEAR FEET OF NEW FENCE
2) DO NOT DISTURB PROPERTY PINS
3) CONTRACTOR TO FIELD LOCATE ALL EXISTING UTILITIES.
4) DO NOT DISTURB EXISTING UTILITIES, EXCEPT AS REQUIRED BY CONSTRUCTION AND APPROVED BY ENGINEER
5) AREAS FOR TOPSOIL SALVAGE WILL BE DESIGNATED IN THE FIELD BY THE ENGINEER
6) REMOVE AND DISPOSE OF ALL DEBRIS AND TRASH WITHIN THE LIMITS OF CONSTRUCTION



PROPERTY LOCATION MAP

DRAWING NOT TO SCALE

LEGEND

- ● FIELD LOCATED PROPERTY CORNER
- ┼ INTERSECTION OF PROPERTY LINES WITH NO MARKERS. PROPERTY BOUNDARY SHOWN IS BASED SOLEY ON RECORDS.
- —x— PLANNED NEW FENCE LINE
- —P— EXISTING OVERHEAD POWER LINE (APPROX.)

BILLMAYER ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

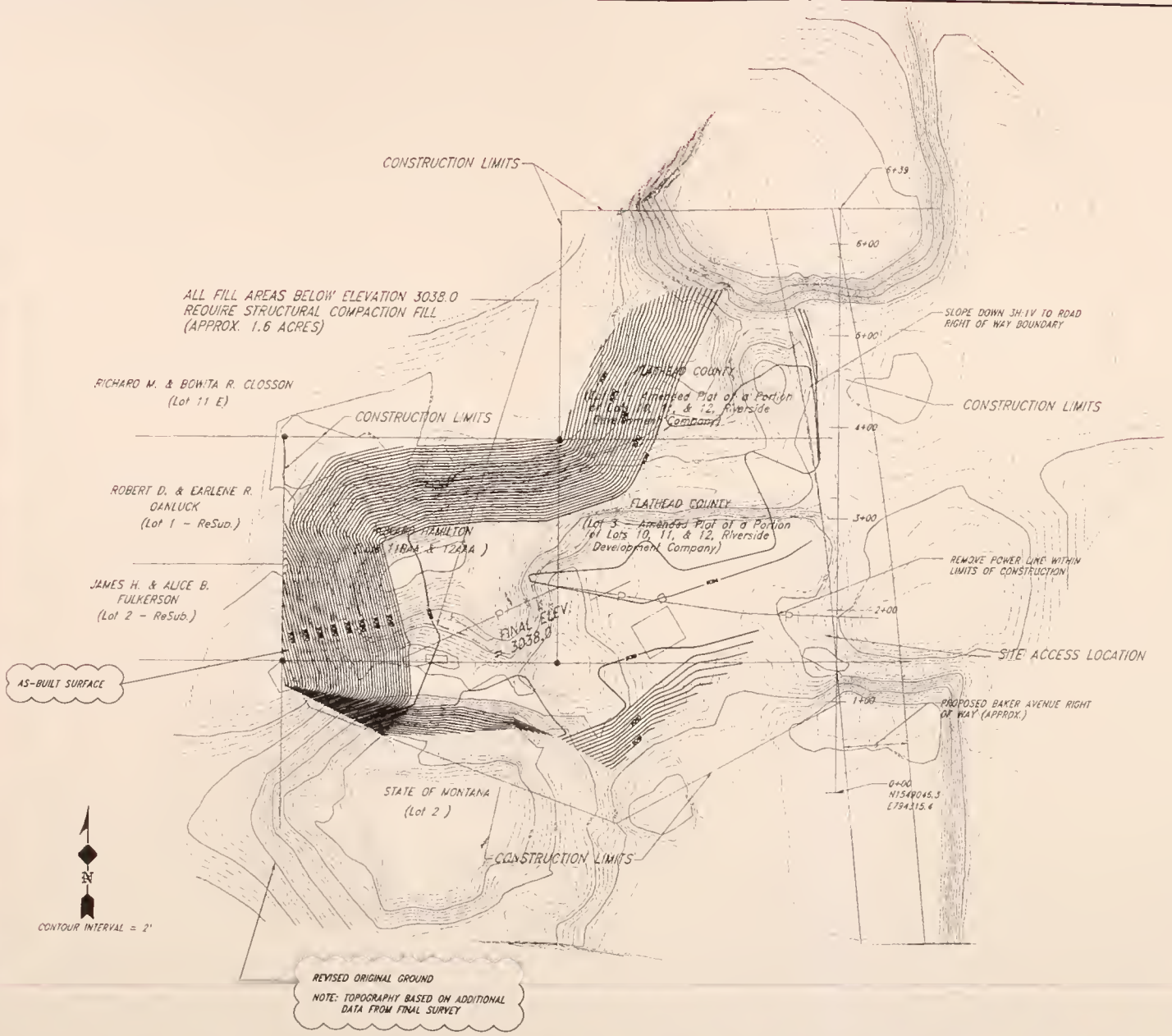
RMB/SAH DRAWN	SJP/GEA DESIGNED	GEA CHECKED	SCALE HORIZ: 1"=60' VERT: N/A
GEA APPROVED	11/1/95 DATE	125.9502 PROJECT NO.	SCALE IN FEET 0 60 120

MONTANA DEPT OF STATE LANDS
WHITEFISH, MONTANA
WHITEFISH SAND AND GRAVEL PITS

Prepared By:
ESA CONSULTANTS INC.
215 West Mendenhall, Suite C-1, Bozeman, MT 59715

EXISTING PLAN VIEW AND LOCATION MAP
PIT NO. 4

SHEET 4-1



NOTES:

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2) CONTRACTOR TO FIELD VERIFY LOCATIONS OF ALL UTILITIES.
3) CONTRACTOR SHALL PRESERVE AND PROTECT TREES WITHIN LIMITS OF CONSTRUCTION AS DIRECTED BY ENGINEER

ENGINEERS EARTHMOVING ESTIMATE

CUT/FILL	FINAL GRADING SURFACE AREA
~~35500 C.Y.~~	~~5.5 AC.~~
38067 C.Y.	4.9 AC.

NOTE: REVISED QUANTITIES BASED UPON FINAL SURVEY

LEGEND

3040	PROPOSED GROUND INDEX CONTOUR
3038	PROPOSED GROUND INTERMEDIATE CONTOUR
3040	EXISTING GROUND INDEX CONTOUR
	EXISTING GROUND INTERMEDIATE CONTOUR
P	EXISTING OVERHEAD POWER

NO.	BY	DATE	REVISION DESCRIPTION

RMB/SAH DRAWN | SJP/DEA DESIGNED | DEA CHECKED
DEA APPROVED | 11/1/95 DATE | 125-95/02 PROJECT NO

SCALE HORIZ. 1"=60' VERT. N/A
SCALE IN FEET 0 60 120

MONTANA DEPT OF STATE LANDS
WHITEFISH, MONTANA
WHITEFISH SAND AND GRAVEL PITS

Prepared By:
ESA CONSULTANTS
215 West Mendenhall, Suite C-1, Bozeman, MT 59715

GRADING PLAN
PIT NO. 4

SHEET 4-2

ATTACHMENT 6:

Structural Fill Density Test Summary

FIELD DENSITY TEST SUMMARY

JOB NAME Whitefish Sand + Gravel Pits JOB NO. 126.9502 TESTS ON Structural Fill Pit # 03 Pg. 1 of 1

*SC = Sandcone Density; NG = Nuclear Gauge Density Test

Test No.	Date Tested	Test Type*	Moisture Content, (%)	Field Wet Density, (pcf)	Field Dry Density, (pcf)	Compaction Curve No.	Lab Maximum Dry Density, (pcf)	Relative Compaction, %	Specified Relative Compaction, %	Average of Previous Tests	Comments
301	8-1-95	NG	5.4	130.2	123.5	05	129.0	95.7	95.0		
302	8-1-95	NG	4.9	127.4	121.4	05	129.0	94.1	95.0		RE-COMPACTED + RE-TESTED
302A	8-1-95	NG	5.2	136.2	129.4	05	129.0	100.3	95.0		SEE 302 A
303	8-2-95	NG	4.8	136.4	130.2	05	129.0	100.9	95.0		
304	8-2-95	NG	4.4	139.3	133.4	05	129.0	103.4	95.0		
305	8-2-95	NG	4.7	135.7	129.6	05	129.0	100.5	95.0		
306	8-3-95	NG	4.5	136.2	130.4	05	129.0	101.0	95.0		
307	8-3-95	NG	4.7	136.4	130.2	05	129.0	100.9	95.0		
308	8-3-95	NG	3.4	141.5	136.8	05	129.0	106.0	95.0		
309	8-3-95	NG	4.6	138.6	132.5	05	129.0	102.7	95.0		
310	8-4-95	NG	3.9	134.2	129.1	05	129.0	100.1	95.0		
311	8-4-95	NG	4.8	133.9	127.7	05	129.0	98.9	95.0		
312	8-4-95	NG	4.7	134.2	128.2	05	129.0	99.4	95.0		
313	8-4-95	NG	4.8	138.6	132.3	05	129.0	102.6	95.0		
314	8-4-95	NG	4.8	136.4	130.2	05	129.0	100.9	95.0		
315	8-7-95	NG	11.9	131.8	117.7	06	118.0	99.7	95.0		
316	8-7-95	NG	13.6	130.6	114.9	06	118.0	97.4	95.0		
317	8-7-95	NG	13.8	132.7	116.6	06	118.0	98.8	95.0		

ESA CONSULTANTS
Fort Collins, CO

FIELD DENSITY TEST SUMMARY

JOB NAME Whitefish Sand + Gravel Pits JOB NO. 126.9502 TESTS ON Structural Fill - Pit # 04 Pg. 1 of 2

*SC = Sandcone Density; NG = Nuclear Gauge Density Test

Test No.	Date Tested	Test Type*	Moisture Content, (%)	Field Wet Density, (pcf)	Field Dry Density, (pcf)	Compaction Curve No.	Lab Maximum Dry Density, (pcf)	Relative Compaction, %	Specified Relative Compaction, %	Average of Previous Tests	Comments
401	7-12-95	NG	10.5	139.2	126.0	02	131.4	95.9	95.0		
402	7-12-95	NG	5.6	128.4	121.5	03	122.5	99.2	95.0		
403	7-12-95	NG	23.2	121.7	98.8	(Reference ONLY)	NO TEST	—	—		UNDISTURBED CLAY - REF. ONLY
404	7-12-95	NG	26.1	121.1	96.0		"	—	—		"
405	7-12-95	NG	14.3	124.3	109.0	04	115.0	94.8	95.0		
406	7-12-95	NG	15.2	124.8	108.6	04	115.0	94.5	95.0		
407	7-13-95	NG	15.0	131.6	114.4	04	115.0	99.5	95.0		
408	7-13-95	NG	15.2	127.2	110.4	04	115.0	96.0	95.0		
409	7-13-95	NG	8.5	140.0	129.0	02	131.4	98.2	95.0		
410	7-13-95	NG	5.7	133.9	126.1	02	131.4	96.4	95.0		
411	7-13-95	NG	6.1	139.1	131.0	02	131.4	99.7	95.0		
412	7-13-95	NG	11.1	137.1	123.4	04	115.0	107.3	95.0		
413	7-14-95	NG	4.7	136.5	130.3	02	131.4	99.2	95.0		
414	7-14-95	NG	10.8	137.8	124.3	02	131.4	94.6	95.0		
415	7-14-95	NG	13.1	124.8	110.3	04	115.0	95.9	95.0		
416	7-14-95	NG	3.8	129.9	125.1	02	131.4	95.2	95.0		
417	7-14-95	NG	5.8	131.8	124.6	02	131.4	94.8	95.0		
418	7-14-95	NG	5.9	131.4	124.0	02	131.4	94.4	95.0		

ESA CONSULTANTS
Fort Collins, CO

FIELD DENSITY TEST SUMMARY

JOB NAME Whitefish Sand & Gravel JOB NO. 126.9502 TESTS ON Structural Fill Pit # 04

*SC = Sandcone Density; NG = Nuclear Gauge Density Test

Test No.	Date Tested	Test Type*	Moisture Content, (%)	Field Wet Density, (pcf)	Field Dry Density, (pcf)	Compaction Curve No.	Lab Maximum Dry Density, (pcf)	Relative Compaction, %	Specified Relative Compaction, %	Average of Previous Tests	Comments
419	7-18-95	NG	13.5	121.7	107.2	04	115.0	93.2	95.0		RE-compacted + retested
419 A	7-18-95	NG	13.5	123.4	108.7	04	115.0	94.5	95.0		SEE 419 A.
420	7-18-95	NG	5.8	125.6	118.7	03	122.5	96.9	95.0		
421	7-18-95	NG	15.8	120.5	104.6	04	115.0	90.9	95.0		RE-compacted + RE-tested
421 A	7-18-95	NG	14.0	124.4	109.1	04	115.0	95.0	95.0		SEE 421 A
422	7-20-95	NG	12.1	123.9	110.5	04	115.0	96.1	95.0		
423	7-20-95	NG	12.8	124.0	109.9	04	115.0	95.6	95.0		
424	7-20-95	NG	12.6	124.6	110.7	04	115.0	96.3	95.0		
425	7-20-95	NG	12.8	124.2	110.2	04	115.0	95.8	95.0		
426	7-31-95	NG	12.3	124.7	111.0	04	115.0	96.5	95.0		
427	7-31-95	NG	12.4	125.3	111.5	04	115.0	96.9	95.0		

ESA CONSULTANTS
Fort Collins, CO

ATTACHMENT 7:

Photographs and Slides

(1) Three D8 dozers used during construction
(2) A water truck and a service truck used during construction
(3) Chipper with conveyor
(4) Sheep's foot compactor used for structural fill compaction in Pits #03 and #04
(5) PIT # 1: View of highwall taken from mid-pit
(6) PIT #01: View looking north
(7) PIT #1: View of south portion of pit
(8) PIT #1: View of area where dike construction not necessary
(9) PIT #1: View of grass lined swale and top of collector ditch
(10) PIT #3: View looking west
(11) PIT #03: View looking southwest
(12) PIT #03: View looking south from Burlington RR tracks
(13) PIT #03: Cottonwood tree in foreground center whose trunk was buried approx. 15 feet during fill placement
(14) PIT #03: Structural fill compaction .
(15) PIT #03: Pit floor following cut/fill operations
(16) PIT #03: East-facing side slope
(17) PIT #03: Construction of 34:IU slope against southern highwall
(18) PIT #03: Placement of rip rap in collector ditch
(19) PIT #01: Placement of rip rap in collector ditch
(20) PIT #03: Placement of gravel drain blanket for spring #4
(21) PIT #04: Prior to construction
(22) PIT #04: Prior to construction
(23) PIT #04: Empty fuel tank on top of ridge
(24) PIT #04: Compaction of lift #1 structural fill in east end of pit
(25) PIT #04: View of east facing side slope closest to Baker Ave. extension
(26) PIT #04: Compaction test--structural fill
(27) PIT #04: view of side slope construction and pit floor
(28) PIT #04: Construction of 3H: IU side slope, note horizontal lifts
(29) PIT #04: Flattening top of existing bank in construction of 3H: IU sideslope
(30) PIT #04: General location of contaminated soil
(31) PIT #04: Site of excavated contaminated soils
(32) PIT #04: Contaminated soil stockpile
(33) PIT #04: Pet cemetary
(34) PIT #01: View looking south after completion
(35) PIT #01: Completed northern slope
(36) Entrance gate to PIT #01
(37) PIT #01: View looking northwest
(38) PIT #02: View looking south
(39) PIT #02: Fencing on south end
(40) PIT #02: View looking west
(41) PIT #03: View looking east
(42) PIT #03: West slope up to Birch Point Drive
(43) PIT #03: Erosion control in southeast corner
(44) PIT #03: Southern slope after seeding, mulching, and crimping

(45) PIT #04: View looking north
(46) PIT #04: Southern end
(47) PIT #04: Baker Avenue construction zone adjacent to the east side of the pit
(48) PIT #04: Erosion control and fence line along southern edge
(49) PIT #04: Erosion control and fence line along northern boundary
(50) Typical galvanized gate
(51) Mulch tilled crimper
(52) Allis-Chalmers Model 180 tractor
(53) John Deere disk
(54) Trailer mounted hay blower
(55) John Deere 9350 Drill Seeder

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